

Waters Of The Past & Present - The Revival Of Water's  
Forgotten Stories, The Relationship Of Water To  
Architectural Development For The Chiva Warin Center  
(River Life Center) By The Mae Ping River,  
Chiang Mai, Thailand

SunLin Goh  
May 2012

*Submitted towards the fulfillment of the requirements for the Doctor of Architecture Degree.*

School of Architecture  
University of Hawai'i

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The Relationship Of Water To Architectural Development For  
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*We certify that we have read this Doctorate Project and that, in our opinion, it is satisfactory in scope and quality in fulfillment as a Doctorate Project for the degree of Doctor of Architecture in the School of Architecture, University of Hawai'i at Mānoa.*

Doctorate Project Committee



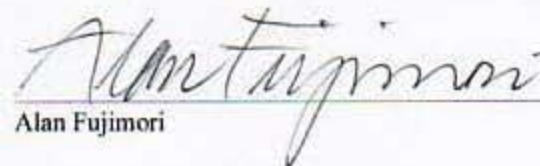
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Alan Fujimori

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<b>List of Illustrations</b>	<b>Page</b>
Fig. 1 The Chao Phraya River tributaries throughout Thailand. (Beck, 2004, pg. 11)	15
Fig. 2 Floating community in Thailand in comparison to Kenzo Tange's Tokyo Bay Master Plan (Beck, 2004, pg. 70)	16
Fig. 3 The many types of Nak representation on temple roofs and entrance in Thailand. (Beck, 2004, pg. 101)	21
Fig. 4 A statue of Mae Thoranee's good deed to Lord Buddha. This statue is near the Grand Palace Complex along the Chao Phraya River (Beck, 2004, pg . 91)	24
Fig. 5 Great flood in 1942, Bangkok was submerged for weeks, Hualumampong Station, Bangkok's main railway terminus. (Beck, 2004,pg.191)	29
Fig. 6 1987 Flood levels at the Police station (beside the Mae Ping River) entrance is 15 cm while the rest of the area is 30cm deep. (www.hydro-1.net)	30
Fig. 7 Shan and Shui: The Yin – Yang, Shan – Shui, Male – Female Attributes serve as inspiration for design. (Moore, Mitchell and Turnbull Jr., 1993, pg.3)	36
Fig. 8 Map of sources of pollution, from duck farms, squatters, etc.(Ministry Of The Environment, 1987, pg. 15)	37
Fig. 9 Singapore Boat Quay in 1977. (The Minister Of The Environment, 1987, pg. 8)	38
Fig. 10 Singapore River after the cleanup at the Robertson Quay, 1987. (The Ministry Of The Environment, 1987, pg. 10)	38
Fig. 11 The Khwaju Bridge a gathering place on top of water, Isfahan, Iran (1642-67). (Blair and Jonathan Bloom, 2009, pg.9)	42
Fig. 12 Transition of the Klang/Gombak River over the years. ( <a href="http://www.viweb.freehosting.net/viOldVI.htm">http://www.viweb.freehosting.net/viOldVI.htm</a> )	43



Fig. 13 The Gombak/Klang River running through Kuala Lumpur center.( <a href="http://www.viweb.freehosting.net/viOldVI.htm">http://www.viweb.freehosting.net/viOldVI.htm</a> )	44
Fig. 14 The Gombak River is now little more than a drainage canal. ( <a href="http://www.viweb.freehosting.net/viOldVI.htm">http://www.viweb.freehosting.net/viOldVI.htm</a> )	44
Fig. 15 Plan of Georgetown, Penang, 1798. (Fee, 1998, pg. 64)	45
Fig. 16 Chinese shop houses along Penang's many lanes (Chen Voon Fee, 1998,pg. 90)	46
Fig. 17 Diagram : Rattanakosin Island in context to the Chao Phraya River	50
Fig. 18 Diagram: the Rattanakosin Island in context to the city	50
Fig. 19 Floating food vendors in Khlong Bangkok Yai are more common in these waterways, but few are seen on the main body of the Chao Phraya. (Hamburger, 2008, pg. 47)	51
Fig. 20 This vendor is in a less welcoming venue to work in this khlong. (Hamburger, 2008, pg. 33)	51
Fig. 21 Buddhist worshippers sit in their boats to listen to an abbot give a sermon 100 years ago. (Beck, 2004, pg. 209)	53
Fig. 22 Popular Water taxi on the Chao Phraya River (Beck, 2004, pg. 57)	54
Fig. 23 Malacca: Existing Land use. (Government of Malaysia, 2011, pg.33)	56
Fig. 24 Malacca: Activity Zoning Diagram. (Government of Malaysia, 2011, pg. 53)	57
Fig. 25 Malacca: Zoning Map. (Government of Malaysia, 2011, pg. 12)	58
Fig. 26 Malacca: Development Projects Map. (Government of Malaysia, 2011, pg. 16)	58

Fig. 27 Thailand: Before when the waterways were filled with waterbourne villages. (Beck, 2004, pg. 201)	62
Fig. 28 Thailand, Phitsanulok on the Nan River: One of the few remaining floating community in Northern Thailand. (Beck, 2004, pg. 201)	62
Fig. 29 Old Map of Chiang Mai. (Planning Department of Chiang Mai, 2011)	69
Fig. 30 Map of Chiang Mai drawn in 1897, commissioned by James McCarthy, the first Director of the Military Department of Siam (depicting the Big Pond). (Planning Department of Chiang Mai, 2011)	70
Fig. 31 Diagram: The Mae Ping River most of the time	71
Fig. 32 Table: Constraints and Opportunities of Chiang Mai	72
Fig. 33 Table: Chiang Mai's 7 Driving forces	73
Fig. 34 Diagram: Past images of Wat Gate Community	80
Fig. 35 Diagram: Present scenes of the Kad Luang & Wat Gate spaces	81
Fig. 36 Diagram: The disconnected places	82
Fig. 37 Diagram: The Wat Gate area's present conditions	82
Fig. 38 Diagram: Site location for the new master plan	84
Fig. 39 Diagram: Land use in Chiang Mai	85
Fig. 40 Diagram of the chosen site in context to the rest of the city	85
Fig. 41 Flood Plains of Chiang Mai (Planning Department of Chiang Mai, 2011)	88

Fig. 42	Table: Chiang Mai's flood zones and flood levels	88
Fig. 43	Diagram: Spaces around the Mae Ping River	90
Fig. 44	Diagram: Tai Chi & Relaxation plaza	91
Fig. 45	Plan: Tai Chi & Relaxation plaza	92
Fig. 46a	Master Plan of Chiva Warin Center By The Mae Ping River Zoning Plan	94
Fig. 46	Overall Perspective: Master Plan of Chiva Warin Center By The Mae Ping River	95
Fig. 47	Overall Perspective: Master Plan of Chiva Warin Center By The Mae Ping River	96
Fig. 48	Design Concept Process: Museum	97
Fig. 49	Design Concept Process: Cultural Entertainment Center	98
Fig. 50	Design Concept Process: University	99
Fig. 51	Master Plan of Chiva Warin Center During Non-Flood Time	100
Fig. 52	Master Plan of Chiva Warin Center During Flood Time	101
Fig. 53	Chiva Warin Zoning Map	102
Fig. 54	Chiva Warin Zoning & Pedestrian Circulation Way	103
Fig. 55	Chiva Warin Connective Spaces Map	104
Fig. 56	Chiva Warin Water Canal Linkages To the Mae Ping River Map	105
Fig. 57	Sketch: Improving Pathways during non-flood time	106
Fig. 58	Sketch: Improving Pathways during flood time	107

Fig. 59 Pathway Improvements During Non-Flood Time	108
Fig. 60 Pathway Improvements During Flood Time	109
Fig. 61 Museum Plan During Non-Flood Time	110
Fig. 62 Museum Plan During Flood Time	111
Fig. 63 Museum Elevation	112
Fig. 64 Museum Section	113
Fig. 65 Museum Overall Master Plan Section	114
Fig. 66 Art & Cultural Walkway	115
Fig. 67 Floating Market	116
Fig. 68 Heritage Gallery & Modern Art Gallery Perspective	117
Fig.69 Heritage Gallery & Modern Art Gallery Plan During Non-Flood Time	118
Fig.70 Heritage Gallery & Modern Art Gallery Plan During Flood Time	119
Fig. 71 Heritage Gallery & Modern Art Gallery Section	120
Fig. 72 Heritage Gallery & Modern Art Gallery Overall Master Plan Section	121
Fig. 73 Heritage Gallery & Modern Art Gallery Perspective	122
Fig. 74 Boat Station Plan During Non-Flood Time	123
Fig. 75 Boat Station Plan During Flood Time	124
Fig. 76 Boat Station Perspective	125

Fig. 77 Mae Ping Pedestrian Bridges Plan	126
Fig. 78 Mae Ping Pedestrian Bridges Perspective	127
Fig. 79 Mae Ping Pedestrian Bridges Section A-A	128
Fig. 80 Mae Ping Pedestrian Bridges Section B-B	129
Fig. 81 Mae Ping Pedestrian Bridges Perspective	130
Fig.82 The New Shopping Center Roof Plan	131
Fig. 83 The New Shopping Center Plan	132
Fig. 84 The New Shopping Center Elevation & Section	133
Fig. 85 The New Shopping Center Section A-A	134
Fig. 86 The New Shopping Center Section B-B	135
Fig. 87 The New Shopping Center Interior Render	136
Fig. 88 Fisherman's Wharf Plan During Non-Flood Time	137
Fig. 89 Fisherman's Wharf Plan During Flood Time	138
Fig. 90 Fisherman's Wharf Perspective	139
Fig. 91 Chiang Mai University Plan During Non-Flood Time	140
Fig. 92 Chiang Mai University Plan During Flood Time	141
Fig. 93 Chiang Mai University Elevation	142
Fig. 94 Chiang Mai University Section F-F	143

Fig. 95 Chiang Mai University Perspective	144
Fig. 96 Chiang Mai Cultural Entertainment Center Plan	145
Fig. 97 Chiang Mai Cultural Entertainment Center Section	146
Fig. 98 Chiang Mai Cultural Entertainment Center Outdoor Amphitheatre Sketch	147
Fig. 99 Chiang Mai Cultural Entertainment Center Sketch	148
Fig. 100 Chiang Mai Cultural Entertainment Center Perspective	149
Fig. 101 Spa Meditation Center Plan	150
Fig. 102 Spa Meditation Center Plan	151
Fig. 103 Spa Meditation Center Plan Spa Typical Unit	152
Fig. 104 Spa Meditation Center Section E-E	153
Fig. 105 Spa Meditation Center Perspective Sketch	154
Fig. 106 Boardwalk & Bicycle Lane Drawing	155
Fig. 107 Overall Perspective: Master Plan of Chiva Warin Center with Wall/Moat City in Background	156
Fig. 108 Overall Perspective: Master Plan of Chiva Warin Center	157
Fig. 109 Overall Perspective: Master Plan of Chiva Warin Center with Wall/Moat City in Background	158
Fig. 110 Image of Overall Perspective of Physical Model	164

Table of Contents	Page
<b>List of Illustrations .....</b>	<b>2</b>
<b>Abstract.....</b>	<b>11</b>
Introduction .....	12
Methodology.....	19
<b>Chapter 1: Water and rivers in the Thai Context.....</b>	<b>21</b>
The History of Thai Water Symbolism .....	
<b>Chapter 2: Water's Benefitting &amp; Destructive Properties .....</b>	<b>27</b>
<b>Chapter 3: Lessons Learned – Countries of interest and their relationship with water .....</b>	<b>33</b>
Suzhou, Beijing and other Chinese Examples of using water as a powerful element in Architecture .....	
Singapore History, Present and Future Development: Singapore's Waterways .....	
The Use of water in Islamic Architecture .....	
Malacca, Penang, Kuala Lumpur in Malaysia: Their historical development, Present status and future promises: Kuala Lumpur's Klang and Gombak River confluence - Malaysia .....	
<b>Chapter 4: Selection of Places of importance to the redevelopment for Chiang Mai: .....</b>	<b>48</b>
Places of Significance and Integrity: Malacca – Malacca River.....	
Settlement and Land use Patterns from selected periods of historic evolution .....	
<b>Chapter 5: Chiang Mai - History, Present Strengths, Defects &amp; Her Future .....</b>	<b>61</b>
Chiang Mai – Mae Ping River .....	
Lanna Art and Architecture.....	
Settlement and Land use Patterns from selected periods of historic evolution .....	
Chiang Mai's Future Driving Forces .....	

<b>Chapter 6: Site Analysis.....</b>	<b>77</b>
<b>Chapter 7: New Design on the Mae Ping River Edge .....</b>	<b>89</b>
Parameters for Design .....	
Interview with Wat Gate Community .....	
<b>Chapter 8: The New Chiang Mai Riverfront Center By The Mae Ping River Master Plan .....</b>	<b>94</b>
Design Project .....	95
Conclusion .....	159
Reflections .....	162
Bibliography .....	165
Appendix .....	168



## D. Arch Abstract

This Doctorate Project studies waterfront cities and proposes a new waterfront development in Chiang Mai, Thailand around an ancient river that is not used to its full potential. The Doctorate Project is divided into two components, one is the research component where precedent case cities are selected for their waterfront locations and the symbolism of water in Thai culture, and two the second component is the design project which is a New Chiang Mai Urban Waterfront Center master plan (The Chiva Warin Center By the Mae Ping River) to revive the urban linkage between a historical site which has been divided from lack of use and accessibility, growing disconnected from each other. The site location is on both sides of the Mae Ping River consisting of marketplace and institutional buildings on one side of the riverbank and an entertainment edge, heritage shop houses and residences on the other side.

### Objectives of Design Project:

- Preserve culture and still show authenticity of heritage in context to time and site.  
Through analysis identify which areas of the site must be preserved and what is past regeneration so that it can be used as the design redevelopment areas.
- Bring recognition to a river which has been part of the site's history.
- Achieve this with a walkable and cultural corridor along the Mae Ping's edge.
- Allow future floods through the new master plan with elevated boardwalks so that daily activities continues during the flood days.

## Introduction

Throughout the ages the requirements in which villages searched for in their choice of a place of settlement were typically close to a water's source; Bangkok and Chiang Mai was founded on a flood plain, a water basin. "Water even figures in something as fundamental as house orientation, the traditional belief being that (the) Thai-style house should face a river or a courtyard pond."<sup>1</sup>Water is essential for the needs of survival.

The Chao Phraya River of which the Mae Ping River is one of the tributaries of plays a key role in Thailand's history, economy and culture. Thais have always had a connection with water up until now, we believe that water is the 'mother of life, pre-dating the birth of all other natural elements', "Beneath this visible manifestation of Thai belief is a tacit recognition of water as a core concept underpinning Thai thought."<sup>2</sup> In the creation of earth in Thai myths, there was a great flood which submerged the whole world, when the water receded land appears and then a mountain with the gourd plant housing the parents of the various tribes of the world is struck open by a god.

Water is the incubator, for rice and fish, the nation's staple food as well as other flora and fauna which flourishes from it such as salt and fruits, it is the basis for Thailand. The three most important festivals, Songkran in April and Esan's firing of primitive rockets during Ngan Boon Bangfai in May to invoke the deities that control rain and water to make rainfall during the hot season months of April and May are world renown water traditions that fortunately are kept with a few changes (that are more commercialized) are what makes Thai water culture so interesting and noteworthy. Loy Kratong is another water festival that is held during November

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<sup>1</sup> Steve Van Beck, *Thailand Reflected In A River*, (Hong Kong: Wind & Water Ltd., 2004), 82.

<sup>2</sup> Steve Van Beck, *Thailand Reflected In A River*, (Hong Kong: Wind & Water Ltd., 2004), 82.

when water levels are highest; this is to make a connection to the spirit world where water is the conduit for connection and communication, similar to the Chinese Hungry Ghosts Festival in Penang, Malaysia where they burn incense and ghost money to communicate with the dead instead of floating beautiful floating candles and boats.

Rivers, oceans and waters, provide the basis for negotiating life's obstacles. Typically Asian and very Tao too, rivers flow around rocks and do not confront other elements head-on. Thais blend their lives together to achieve social harmony that is until very recently when the red shirts and yellow shorts emerge as a new phenomenon in Thai political life.

Together with a myriad of natural and manmade klongs (waterways), canals, the four big tributaries of the Chao Phraya River namely the Mae Ping, Wang, Yow and Nan rivers they constitute a web of riverine transportation routes upon which a good deal of boating activities from royal festivals, great boat races, to ferrying goods and people and of course the incredibly colorful floating markets that are world famous took place in the past. Now that role is slowly disappearing.

In the past not only was water something people used to clean and drink but it was literature, mythology and poetry. So much of Thai history and culture is influenced by folklore of mighty crocodile gods and water deities that their lives revolved around them; an old traditional parting in Thai used by the villagers was "rawang chorakhae" which means "Watch out for the crocodiles!" this was used in the same manner as a modern traveler might be told to "drive safely"<sup>3</sup>; because at one time the waters were infested with crocodiles and this was one of the fear factor of Thai waterways. The river used to hold such great mysteries within its depths that villagers used to fear it, the water and river deities were more a part of the daily lives and

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<sup>3</sup> Steve Van Beck, *Thailand Reflected In A River*, (Hong Kong: Wind & Water Ltd., 2004), 85.

conversation of the time which must be appeased, now the crocodiles have almost been hunted down to extinction and the deities have been forgotten.

The lotus, a water dwelling plant is a significant symbol in Thai and Buddhism cultures because its strength and beauty overshadows its muddy water conditions. Water is symbolic of a journey, the cycle of life and its inhabitants beliefs.

In the case of Malaysia's capital city of Kuala Lumpur, shops and street vendors used to line the edges of the Klang/Gombak River creating a vibrant venue for shopping, eating, social gatherings and festivals. In some cases this way of life still exists but the worst case scenarios are the ones where these once majestic rivers have become an unsightly and smelly drainage canal that runs through an urban center e.g. the Klang and Gombak Rivers in Kuala Lumpur where buildings are being developed without recognizing the historical landmark that runs through a major city node.

In my opinion Chiang Mai the Northern province of Thailand is still holding on to some of these traditions and sustaining the way of life on the river. I propose to use Chiang Mai because the tourist sector seems to be what is keeping these traditions alive. But what about the local people? Do they still go to the riverside markets every morning like they used to as part of their daily routine in the old days or is it just for the tourists who go there to buy cheap imitation bags and mass produced crafts that are supposed to embody the Thai culture? Are stories still made of water gods and spirits? Do they still believe in their ancestor's stories?

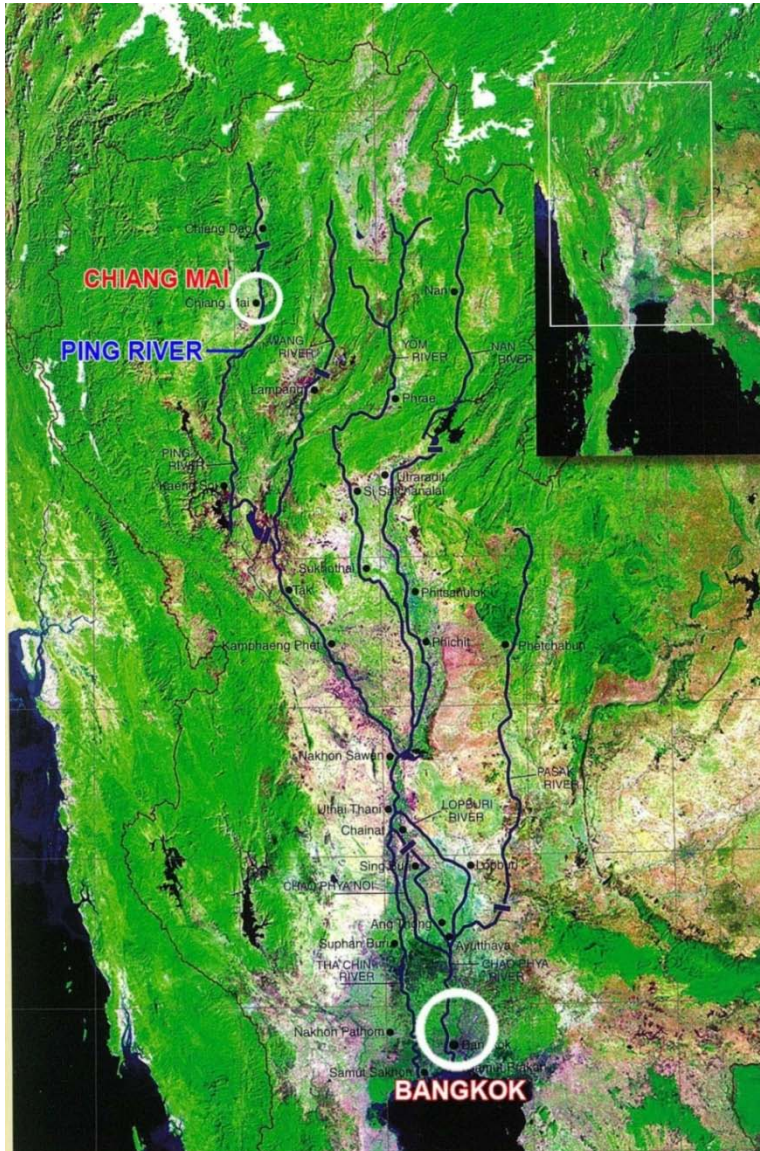


Figure 1 - The Chao Phraya River tributaries throughout Thailand. (Beck, 2004, pg. 11)

## The Past - The Present -The Future Roadmap

Why is a study of the past and traditional vernacular architecture instructive?

It is only when we understand the historical development of a nation's culture, can we appreciate the beauty and reasons for the existing conditions of the present. This hopefully will point the way to the future and inspire us to create a meaningful blueprint and achieve a design

solution that will embrace the best of the past and present using contemporary technology, new materials and new means to advance the architecture of the nation.

This is why contemporary Thai architecture for Chiang Mai would be relevant to our times, it will not be merely imitation but would be continuously valid, promoting an evolution in living culture.

An example of how this can be done, is evident in the metabolist Kenzo Tange's design for Tokyo Bay. To solve Tokyo's housing traffic problems, to cater to an ever expanding population growth and to utilize the latest technology in marine engineering structure Tange's remarkable Tokyo Bay design juts out into the ocean on mega structures and is very sensitively done.



Figure 2- Floating community in Thailand in comparison to Kenzo Tange's Tokyo Bay Master Plan (Beck, 2004, pg. 70)

What is most unexpected is the strong resemblance of his master plan with the cluster of floating houses on the water of northern Thailand. Even the curved superstructures of his massive housing roofs floating like waves on Tokyo Bay are so reminiscent of Thai water borne architecture.

I find it instructive to similarly study famous water towns like Suzhou in China, Malacca, Penang, Kuala Lumpur in Malaysia, the thoroughly modern contemporary oceanfront city of Singapore, surely a great contemporary global city, and, of course Thailand's own Bangkok, Chao

Phraya River development. And lastly not to be left out are some of the great works of Islamic architecture expressing the creative use of water.

Chiang Mai's assets are many, its culture, its history, its unique ancient wall and moat, its ethnic colorful minorities, its Lanna traditional architecture, its fruits, vegetables, flora galore, its cool pleasant spring like climate, its elephants, parks forests, its hilly landscape and rice fields, its handicrafts of exquisite quality, its spas, great hotels, resorts, hospitals, universities, teak/ silver/ ceramics craftsmanship and ethnic style clothes. The list can go on.

But the shortcomings are many too. The proof of this is now in the ongoing political wrangle between the "poor" north and the "rich capital Bangkok in the south.

To summarize my design approach, I am seeking inspiration from the following examples and waterfront developments.

1. Water and rivers in the Thai context.
2. Suzhou's examples of using water as a powerful element in architecture.
3. Malacca, Penang and Kuala Lumpur in Malaysia;  
Their historical waterfront development, present status and future promises of cities located on rivers or having great waterfront.
4. Singapore; Its history, present and future development as a very successful global city of today. The economic lessons of success are worth looking into as we try to transform Chiang Mai into a more convivial city.
5. Thailand's capital city Bangkok and the Chao Phraya Riverfront development.

6. The use of water in Islamic Architecture from the Taj Mahal and the Kwaju Bridge in Isfahan. This makes interesting comparison with the Asian approach and useful lessons can be drawn.
7. Focus on Chiang Mai by site analysis and having informal talks with the district in question about what they want to preserve or improve.



## Methodology:

The ultimate target is to study waterside malls and plazas their affinity to watery places and a waterfront development on a chosen site in Chiang Mai.

-Define the role of water: Covering about two-thirds of earth's surface its importance is undeniable in everything from sustaining life to its roles throughout mythology in different countries. The role of water as a social gathering and storytelling feature. How city and town plazas congregate around waterscapes. How these edges can hold religious and cultural occasions. Study the symbolic, social and aesthetic characteristics of water.

-Look at 6 precedent water cities and towns in the Southeast Asian Region. The goal here is to look at how their waterfront developments evolved throughout history or their success stories. Then based on these case studies study their successes and failures to base my framework for Chiang Mai's concept to learn from.

-Research the state of Chiang Mai's water culture throughout the ages, up until today and 50 years into the future from being an agricultural economy and changing into a medical/educational tourist economy.

-Propose a master plan for the revival of the Chiang Mai riverfront which ties up the water community and Warorot Market (Kad Luang).

"One of the first things to be established was the market, followed by religious buildings."<sup>4</sup> Markets are places where locals go to meet, be entertained and shop; markets have lined along the riverbanks so that it was easy for visitors to see and visit by boat, foot, horseback

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<sup>4</sup>Michael Freeman, *Lanna Thailand's Northern Kingdom* (London: Thames & Hudson Ltd, 2001), 106.

and elephant back . The villagers would bring their goods and put them on display, the market along the Mae Ping River or the moat was a place where villagers would congregate, a communication center where communal activities were based around water. Even the journey from the house, neighborhood to the market is an important aspect as residents would have to walk along the malls or plazas beside the water bodies. “While today the cities of Lanna have substantially modernized, villagers in rural areas live much the way they did half a millennium ago. Rice is still harvested and planted by hand,”<sup>5</sup> which is why coexisting with nature is so important to Lanna people at the time.

For the planning for Chiang Mai, the study of precedent cities are good eye openers to learn from the best and notable whilst keeping and developing Chiang Mai’s unique and precious cultural heritage.

Chiang Mai is not as big as Singapore although it is Thailand’s second largest city. However its aspirations and search for a better life for its people through good design and planning to reinvent itself into a great inland city comparable in quality and fame to Penang and Malacca is what makes it ideal for the design project.

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<sup>5</sup>Joe Cummings, *Lanna Renaissance*. (Chiang Mai, Dhara Dhevi Hotel Co. Ltd, 2006), 26.

# 1

## **WATER AND RIVERS IN THE THAI CONTEXT**

## The History of Thai Water Symbolism

The Nak or Naga (sanskrit for serpent) a mythological creature that is inspired by the water bodies which curves through the land can be seen at the end of the bargeboards at temples and at the top of gables as well as many other places. "This aquatic symbol permeates the daily life of people everywhere on the 'Asian water front' in mutated forms."<sup>6</sup> Statues of sang are found in temples which is a cross between the nak and a lion; this is the symbolic representation to connect water and land.



Figure 3- The many types of Nak representation on temple roofs and entrance in Thailand. (Beck, 2004, pg. 101)

The cosmological model derived from the Hindu-Buddhist religion was used in deciding how the city was to be designed. The model symbolizes a mountain/ continent (Mount Meru) as the center of oceans with continents in between in a rippling pattern which the naga's coil signifies through the concentric ripples around Mount Meru. The walled city was planned with the shape of a conch sea shell to aide in the urban delineation pattern as it had precedence from Lampang, another Lanna city. The way in which the moat walls were constructed in a particular sequence from the northeastern side of the city, then the southern side and again in

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<sup>6</sup>Sumet Jumsai., *Naga Cultural Origins in Siam and the West Pacific*. (New York: Oxford University Press, 1988), 16.

the set direction emulates the churning of the seas 'thaksina', the clockwise naga circumambulation of the sacred center of mount meru.<sup>7</sup> This supports the reason that Lanna architecture takes precedence from the abstract symbolism of mountains and nature. The goddess of world's rivers who is a deity supreme to all in water literature is Phra Mae Khongkha; originating from India as the Sanskrit antecedents of her name suggests, gave her name to the great river of the sub-continent, the Ganges<sup>8</sup>. In Thailand her name is generic, and applied to all rivers, e.g. the Mae Nam Ping all water bodies have a female connotation to it because there is a maternal sense that comes from the protection of these curvaceous water bodies. In Thai we say Mae Nam before the name of that particular water body which means "mother of water". Thus the Chao Phraya River is called the Mae Nam Chao Phraya in Thai.

Another symbolism of water in Thai culture is the embodiment of Mother Earth, she is called Mae Phra Thoranee. Statues of her are seen all over Thailand especially in temples. She is seen wringing out her hair where water flows out. The story behind her famous position recounts the story of the time when the Lord Buddha was attaining enlightenment he was being distracted by Mara the devil's army. Mae Phra Thoranee came out of the earth and wrung her braid to release water which represented Lord Buddha's collected merits which in the end defeated Mara's army and from there Lord Buddha earned full enlightenment, as well as with the help of a multi-headed nak that sheltered him from the downpour. Mae Phra Thoranee is also responsible for the success of a good rice harvest as she provides rain for farmers. The festival of Songkran is also related to Mae Phra Thoranee as water is used to purify the holy statues and relics.

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<sup>7</sup>Sumet Jumsai., *Naga Cultural Origins in Siam and the West Pacific*. (New York: Oxford University Press, 1988), 152.

<sup>8</sup> Steve Van Beck, *Thailand Reflected In A River*, (Hong Kong: Wind & Water Ltd, 2004), 86.

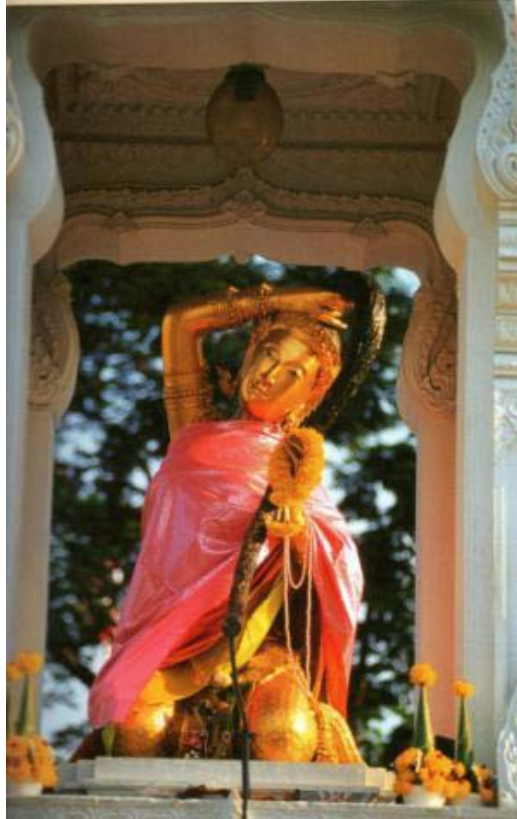


Figure 4 - A statue of Mae Thoranee's good deed to Lord Buddha. This statue is near the Grand Palace Complex along the Chao Phraya River (Beck, 2004, pg . 91)

The festival of Hae Nang Maew is an important water ceremony held in central Thailand's rural villages which is held during drought periods throughout the year for rainfall for crops. The ceremony begins with a selection of a beautiful female cat which is put into a bamboo weaved basket, the basket with the female cat within it is then carried to each house in the village and the household would sprinkle water into the basket. As this procession is happening the members of the march will dance whilst singing a song that rain is already falling and their expressions of gratitude until all of the houses in the village have taken part in it. The

belief is that the cries of the cat as it is being thrown water at, is what calls forth rain for the crop's harvest.

Specifically used in Northern Thai temples are the 'haw trai'<sup>9</sup> which is an archival space which is a structure built on stilts in a lotus pond. The reason for designing a structure like this is to prevent infestation of pests, such as rats or white ants from destroying the ancient manuscripts. Another reason is that water is seen as a spiritual link of cleansing one's soul as they enter or leave the haw trai as well as a symbol of a boat transporting souls to the afterlife.<sup>10</sup> Very similar to the River Styx in Greek mythology which transports the souls of the dead to the afterlife. The forest wat are temple complexes that were built deep inside forests to provide a more isolated and secluded place for meditation and reaching enlightenment that can be found closer to some residential areas as the city grew towards these forests. There is now a mini forest within some of these complexes to try to keep the concept of seclusion from the city.

Water processions have Buddhist influences in which water is a place that carries away past sins and cleanse the person who takes part in it; Songkran is a festival which takes place in mid-April where a type of spring cleaning occurs in one's home to mark the end of one year and a beginning of a new year. Traditionally villagers throw water at each other to cool one another down and to cleanse the spirit. Nowadays Thais throw water at each other because it is a fun tradition of friends and families gathering together with the religious undercurrent as a reason to do so.

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<sup>9</sup>Joe Cummings, *Lanna Renaissance*. (Chiang Mai, Dhara Dhevi Hotel Co. Ltd, 2006), 56.

<sup>10</sup>Sumet Jumsai, *Naga Cultural Origins in Siam and the West Pacific*. (New York: Oxford University Press, 1988), 100.

Loy Kratong is another water festival where lotus-shaped baskets carry a candle and a Thai coin along any type of water body (the Ping River is full of glittering lights at this time). However in Lanna another tradition specific to its locality takes place as well, it is called the Yee Peng festival which is where instead of floating lotus baskets along the river, paper hot air balloons holding a candle are set into the sky to pay homage to a goddess of air and wind (Mae Phra Phai). When Chiang Mai was still considered part of the Lanna Kingdom, Loy Kratong was called Loy Khro (float away misfortune) which the king would lead where he would place a piece of clothing in a banana leaf tray and launch it into the Mae Ping River. This ceremony was to symbolize floating away any ill fortunes, thus cleansing and purifying the whole Lanna kingdom.<sup>11</sup> This tradition is also seen in India's Divali, which is also a festival of lights, illustrating how far this tradition has travelled by water.

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<sup>11</sup> Steve Van Beck, *Thailand Reflected In A River*. (Hong Kong: Wind & Water Ltd, 2004), 116.



# 2

## **WATER'S BENEFITING & DESTRUCTIVE PROPERTIES**

Water is an important entity in the cooling and cleaning activities of our daily life.

Liquids are used as air-conditioning coolants to keep us cool during hot weather, in Thailand this is especially important. On the other hand water can be a very destructive force from flash floods that occur occasionally in the Ping River during the drier seasons; to the devastating tsunamis in Phuket and Japan recently. Luckily Chiang Mai does not suffer from tsunamis but water still has devastating effects on the city as well. Water is a dynamic character that is a force to be reckoned with. These features can benefit the design by making use of innovations such as floating pontoons or platforms supported by piers that allow water to move freely without restricting the its pathway.

Strengths:

- Future technologies allow us to siphon cold water from beneath the ocean's depths to cool the building without using polluting chemical in the air-conditioning unit's coolants. There is the opportunity in using the Ping River's water to circulate within the dwellings to cool off the inhabitants.
- The waterways (khlongs) are used as another method of transportation from cars. khlong transportation is at a slower pace than that of cars which gives people the chance to look around their surroundings.
- Central Thai style houses are on stilts to allow water to flow through the ground space below which allows water to enrich the garden and cool the inhabitants inside the structure above.
- The floods however leave behind siltation which makes the soil very rich in nutrients and minerals to grow vegetation.

- Because of Thailand's hot weather; water plays a role in many colorful festivals that relate to water. Songkran is the most coolest of water festivals because it is celebrated during the most hottest and driest of seasons and is a good way of celebrating the cooling properties of water by lightly sprinkling water on each other or throwing buckets of water in a fun water fight.



Figure 5 - Great flood in 1942, Bangkok was submerged for weeks, Hualumampong Station, Bangkok's main railway terminus. (Beck, 2004,pg.191)

### Weaknesses:

- The Ping River is prone to flash floods during the different seasons, especially the rainy season thus the locals avoid making use of the substantial area of dry riverbed.
- Mudslides from forest deforestation destroy the villages situated along the Ping River. There are mixed opinions from these villages about how to remedy the problem either with more rice fields allocated to the villages with irrigation canals to higher dams to control the Ping River's water movement.
- Floods when the Ping River swells up inundate riverbank residences, businesses and the Night Market district that residences have to build sandbag embankments along the riverbanks and heavy traffic jams.



Figure 6 - 1987 Flood levels at the Police station (beside the Mae Ping River) entrance is 15 cm while the rest of the area is 30cm deep. ([www.hydro-1.net](http://www.hydro-1.net))

- The other aspects of floods are droughts; even with the floods from the rain, mountain and river many farmlands are losing their crops because of the shortage of clean water. The villages on the Northern parts of the Ping River or the one below the Doi Suthep mountain collect most of the water from runoffs so the villages further south get less and less. Even now in effect from Global Warming the drought seasons are lasting longer than usual and just last year the Northern provinces of Thailand, including Chiang Mai were faced with the worst drought in over 20 years. "Over 1,000 water tankers have been used to distribute water at government expense and repairs are being made to 4,960 dams. Chiang Mai is one of the northern provinces to which 713 pumps have been allocated by the Royal Irrigation Department."<sup>12</sup> It is also predicted that this will worsen in the following year for the 24 districts within the area.<sup>13</sup>

-Pollution of the khlongs is very common in Thailand. The Mae Kha canal is highly polluted by the waste disposal from the residences along its banks. Wild vegetation and crops used to grow along the canal banks for the housewives to pick and use in their homemade recipes; it was a sort of community garden where the neighborhood could pick vegetables and garnish for their dishes as well as catching the river fishes added to the canal neighborhood culture. Now however they cannot exist in the polluted conditions. Because there are no other alternatives of drainage disposal all the waste goes into the canal.

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<sup>12</sup>My Chiang Mai Newsletter, "Royal Concern over Chiang Mai Drought"  
<http://www.mychiangmai.com/environmental-issues/royalconcern-over-chiang-mai-drought/>(accessed April 19, 2011).

<sup>13</sup> Editor Thailand Times, "Drought Crisis Deepens,"(Thailand Times Asia, 2010),  
<http://thailandtimes.asia/thailand-news/drought-crisis-deepens/> (accessed April 19, 2011).

## Solutions:

Through urban planning and landscape planning the waterways can be dredged, cleaned and filtered just like Singapore's rivers. Heat reduction techniques such as cooling ponds can be incorporate, using the traditional Thai Lanna style technique to increase ventilation by having a higher roof with air circulation space will reduce to the heat gains within a city. The water features and installations can help in cooling the city centers.

Incorporating the vernacular Thai and Lanna styles of houses on stilts and floodways can help to integrate the manmade with nature. Designs that are on pontoons can rise and sink along with the changing water levels of the Mae Ping River and its waterways. Floodable supporting systems can aide in moving with the Mae Ping River. Allowing the water to overflow a few times a years is part of the Lanna lifestyle as long as residents and visitors can access these places along the river. These pedestrian oriented urban corridors of elevated boardwalks with water purifying biotopes/bioswales and khlongs can help alleviate the traffic conditions.

In response to polluted waterways planted purification bioswales can help to filter and remove impurities from dirty water and be reused for households and landscaping. A natural or a hybrid of natural and technical filtration of the canal water with the implant of these biotopes can bring back the traditional canal lifestyle through a sensitive and innovative landscape of these biotopes with a modern turn.

# 3

## **LESSONS LEARNED - COUNTRIES OF INTEREST & THEIR RELATIONSHIP WITH WATER**

## Suzhou - China

“Renowned for its beautiful stone bridges, pagodas, tranquil gardens and winding waterways, Suzhou is a major draw for sightseers.”<sup>14</sup> The water city of Suzhou is a world heritage city which epitomize some of the finest principles of architecture, landscape design and urban planning. As a famous Chinese goes " Above us is the Heaven, on Earth there is Suzhou and Hangzhou".

Four concepts that are particularly noteworthy:

1. The Concept of Wind and Water (Feng Shui)
2. The Tao Concept of Unity of opposites
3. The Buddhist (Zen) and Confucius philosophy of politics, literature, poetry and human relationships.
4. Yin and Yang (male and female attributes in design).

Suzhou and Hangzhou exemplified these design fundamentals in many ways. According to the ancient Chinese, the earth functions in accordance with the flowing breadth of nature; wind and water are as crucial to life or destruction as is now to be seen in the earthquake tsunami nuclear tragedy of Japan, that it behooves mankind to design their gardens and cities in total harmony with nature. The landscape should not be dominated or mugged, but planning should blend the special features of the wind and land forms taking note of the wind and water conditions, metaphorically and literally speaking.

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<sup>14</sup> Jing Xiaolei., “Liquid Soul: Suzhou’s waterways, at the heart of life and commerce in the city, are gradually being returned to their former appeal,” *Beijing review.com.cn*, no 30 (2008), [http://www.bjreview.com.cn/special/2008-07/19/content\\_138796.htm](http://www.bjreview.com.cn/special/2008-07/19/content_138796.htm).



Underlying all these philosophical metaphors and mythic constructions is the simple fact that every site, location has its unique qualities of stone and earth, of water, leaf and blossom, of architecture context, of sun and shades, of sounds, scents (fragrance or pollution) and wind direction. Seek these out, absorb them and the designer stands a better chance of working in harmony with nature and the music of the universe. Try to dominate them or temper brutally with the earth, then we are inviting trouble.

To the Chinese geomancer or today's architect urban planner, the site or ground will reveal the presence of azure dragons (the male principle) and white tigers (the female) and propitious sites will be found for buildings, gardens or cities where the different currents they represent happen to cross each other and that is where the intriguing nature of the duality of water can be witnessed. The art of feng shui like that of the Chinese acupuncturist is to choose precisely the right spot.

Taoism underpins Chinese landscape design, urban planning and architecture concepts to a significant degree. The Taoist philosophy believes that the Tao, or the way, represents the "flow of the universe", that Tao keeps the universe balanced and ordered. Hence harmony in design and planning is the ultimate objective, the correct way to peace, prosperity, beauty and serenity. In ancient Taoist texts "wu wei " is associated with water through its yielding nature. Therefore one must never dominate nature, or exert one's will against the world, because then earthly harmony and universal balance is disrupted. Man, in the design of Suzhou as in the planning of all Chinese gardens, and cities is a microcosm of the universe.

The ideal to achieve in design is expressed by the paradox that great things can be achieved by small means, that the soft-like water can wear away the hardest rock. Whilst many spectacular water gardens in Suzhou are asymmetrical in plan, rigid symmetry along a powerful

central axis as is best seen in the master plan for Beijing and the Forbidden City, considered by many architects and planners as arguably the finest example of urban planning. This contradiction in symmetry and asymmetry lies at the heart of the Tao and Confucianism and is fundamental to Chinese and indeed most Asian cultures as Chinese concepts of garden design, architecture, and planning found its way to Korea, Japan, Thailand, Singapore and even the U.S.

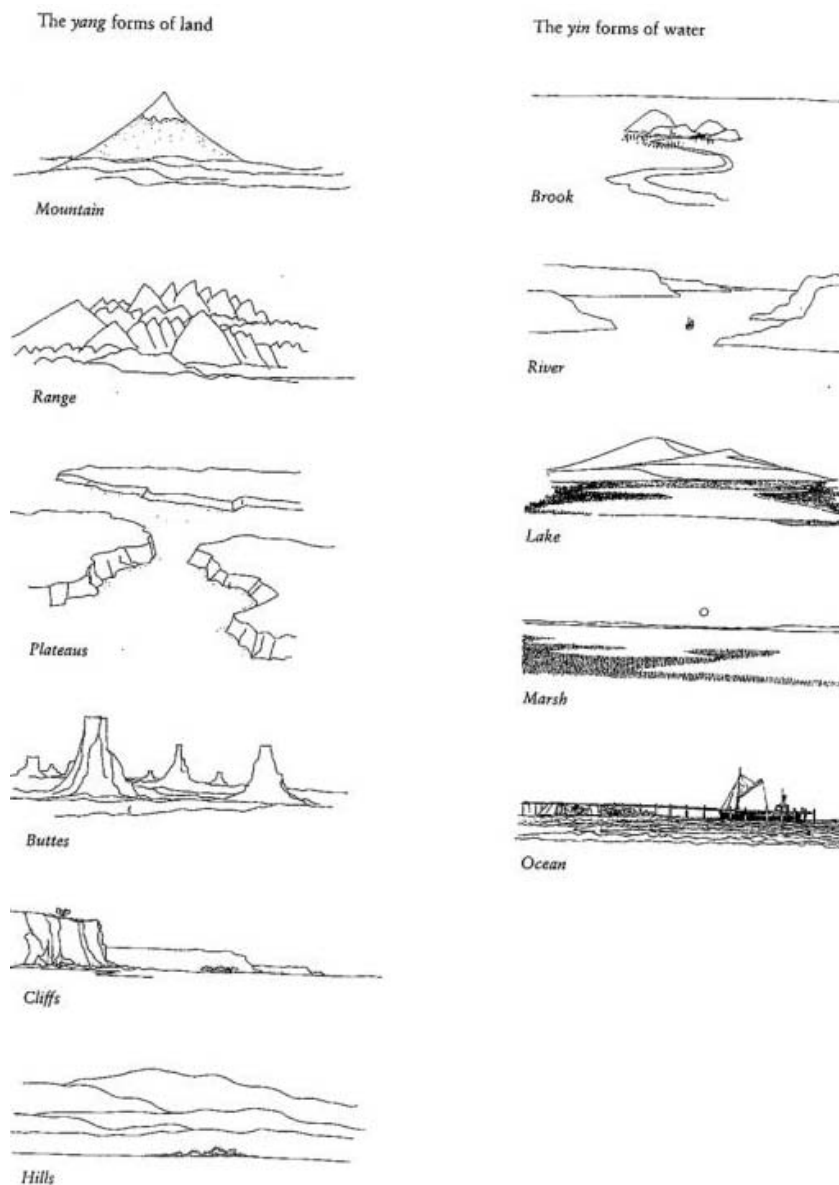


Figure 7- Shan and Shui: THE YIN – YANG, SHAN – SHUI, MALE – FEMALE ATTRIBUTES SERVE AS INSPIRATION FOR DESIGN. (Moore, Mitchell and Turnbull Jr., 1993, pg.3)

## Singapore's Waterways

The "great emporium of these seas" as the British envoy Sir Stamford Francis Raffles recalled Singapore as, is considered the international hub for business and visitors, it is known for its clean and safe environment that one would assume that its waterways and coastal regions are clean as well, this is true but in the old days it was not. This is an example of how the government of Singapore realized the importance of clean water early enough to cleanse their once polluted shores and construct waterways for leisure activities. The waterways of Singapore were once polluted from many sources such as from the markets, squatters that would congregate along the banks of the Singapore and Kallang River, the settlers also dumped their rubbish into the water, and toilet disposals which all eventually led to the coast, and the produce industries contributed to water pollution, where the rivers became open sewers.<sup>15</sup> Life then was very interesting and convivial what with the hawker's bazaars and wet markets even though it was detrimental to the environment.

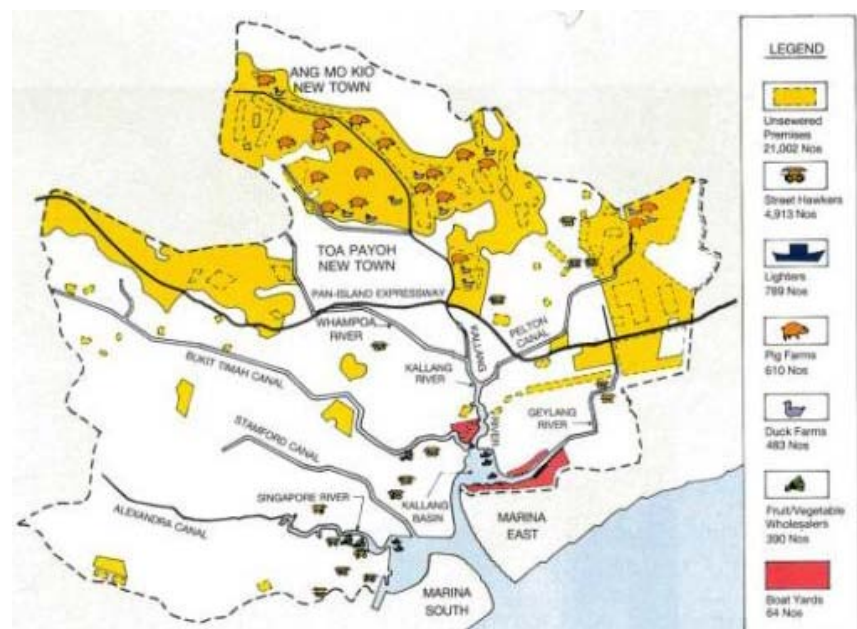


Figure 8 - Map of sources of pollution, from duck farms, squatters, etc.(Ministry Of The Environment, 1987, pg. 15)

<sup>15</sup>Tan Yong Soon, Lee Tung Jean, Karean Tan, *Clean, Green and Blue: Singapore's Journey Towards Environmental and Water Sustainability*. (Singapore: ISEAS Publishing Institute of Asian Studies, 2009), 68.



Figure 9 - Singapore Boat Quay in 1977. (The Minister Of The Environment, 1987, pg. 8)

The water reservoirs were no longer sufficient for the people living on the island especially for the booming hotel businesses by the 1960s, the cleanup of the Singapore rivers began. When the Upper Peirce Reservoir was declared open by Singapore's Prime Minister Lee Kuan Yew in 27 February 1977 he said "It should be a way of life to keep the water clean, to keep every stream, every culvert, every rivulet free from unnecessary pollution. In ten years, let us have fishing in the Singapore River and the Kallang River. It can be done."<sup>16</sup>



Figure 10 - Singapore River after the cleanup at the Robertson Quay, 1987. (The Ministry Of The Environment, 1987, pg. 10)

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<sup>16</sup>Tan Yong Soon, Lee Tung Jean, Karean Tan, *Clean, Green and Blue: Singapore's Journey Towards Environmental and Water Sustainability*. (Singapore: ISEAS Publishing Institute of Asian Studies, 2009), 69.

## Lose of Market Heritage:

The cleaning of Singapore's waters began with resettling the hawkers (to market centers on nearby roads) and squatters along the waterways, compensation were given to businesses that had to move, phase out the industrial businesses such as pig and duck farms. Mooring docks for the busy harbors offered resting and eating facilities (canteens on the breakwaters helped to reduce throwing rubbish into the sea) for the people on the boats to reduce the dumping from living onboard the boats, boatyards were required to comply with anti-pollution requirements or be removed from the Kallang River basin, boats and vessels converted from a two-way route system to a one-way system where they only worked along the wharves. After all the primary concerns were going under change the Singapore river basins were dredged of 260 tonnes of rubbish. Engineering solutions came up with drainage filtration systems to prevent polluting the waters. In 1986 the waterways were tiled and landscaped by Singapore's Parks and Recreation Department along with cleaning up the river some more by dredging out the mud which was replaced with a metre of sand put in. This cleanup cost Singapore almost S\$300 million, excluding the resettlement of the squatters and hawker businesses.<sup>17</sup>

Singapore transformed from a small polluted island into a clean, green and beautiful destination. This is a good example of watery relationship between the city, the only downfall is that the city has not truly used water as a social gathering feature as they value water more for its cleanliness rather than an activity generator and perhaps it is too pristine and precious to have too much human interaction with as loitering is not allowed in Singapore. The removal of the market centers along the waters has caused Singapore to lose its riverfront market lifestyle.

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<sup>17</sup>Tan Yong Soon, Lee Tung Jean, Karean Tan, *Clean, Green and Blue: Singapore's Journey Towards Environmental and Water Sustainability*. (Singapore: ISEAS Publishing Institute of Asian Studies, 2009), 73.

Singapore is indeed a global modern city which is thoroughly planned to meet the challenges of the modern age. It has emerged successfully from third world to first world almost overnight. Although Singapore started as a colony founded by Sir Stamford Raffles during the heyday of British colonial empire building, it has transformed itself through dynamic urban planning, urban renewal, the construction of new towns, state of the art industrial estates, preservation of cultural heritage buildings, a comprehensive master plan for developing its seafront and river front with good design and landscaping to meet the economic demands of a global city and becoming the busiest port in the world. In all their efforts at landscape planning, garden node designing, cleanliness, green environmental design, and the utilization, of state of the art recycling of all waste water into clean water, desalination of sea water into drinking water to reduce its dependence of water from Malaysia; Singapore is blazing new paths in economic and urban planning.

This is a lesson in relying too much on redevelopment. Although the city is very beautiful, clean and convenient; the vibrancy of the old bazaars and markets in which Chiang Mai has somewhat retained is completely lost to Singapore. The aim is to retain and strengthen the market alongside the waters.

## Water And Architecture In Islamic Culture

Water is fundamental to the Islamic way of life as it is in Asia and elsewhere. The rise and flowering of Islamic civilization from countries fronting the Sahara Desert, North Africa, Arabia all across to Central Asia depend largely on the supply and distribution of water. Indeed many great cities in the Islamic lands – Cairo, Damascus, Baghdad, Isfahan, Samarkand, Delhi, are located in relatively arid regions depend on rivers that carry water from distant mountains. From drinking to washing, to irrigation for agriculture, not least in architecture and the arts, water is indispensable and hence has found its highest expression in such masterpieces, as the Taj Mahal, the Alhambra Palace in Seville Spain, the great Khwaju Bridge in Isfahan Iran to name a few. The Khwaju Bridge is noteworthy because of its dual functions acting as a connection between two banks, a dam to control water levels and a meeting point for people.

Water is a vital element of life, regarded as a gift from Allah. In rituals water is a purification substance where rainwater and water from wells and taps are used in ritual bathing especially before entering a mosque. This is one of the reasons why many mosques have bathing pools in their courtyards. Even in death, corpses are cleanse with water before burial. Heaven or Paradise is described in terms of water in the Qur'an to refreshing rivers, cooling rain, and fountains of sweet water. "Traditionally, Muslims have designed parks and gardens around pools and fountains as earthly representations of Paradise."<sup>18</sup>

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<sup>18</sup> Steve Van Beck, *Thailand Reflected In A River*, (Hong Kong: Wind & Water Ltd, 2004), 94.



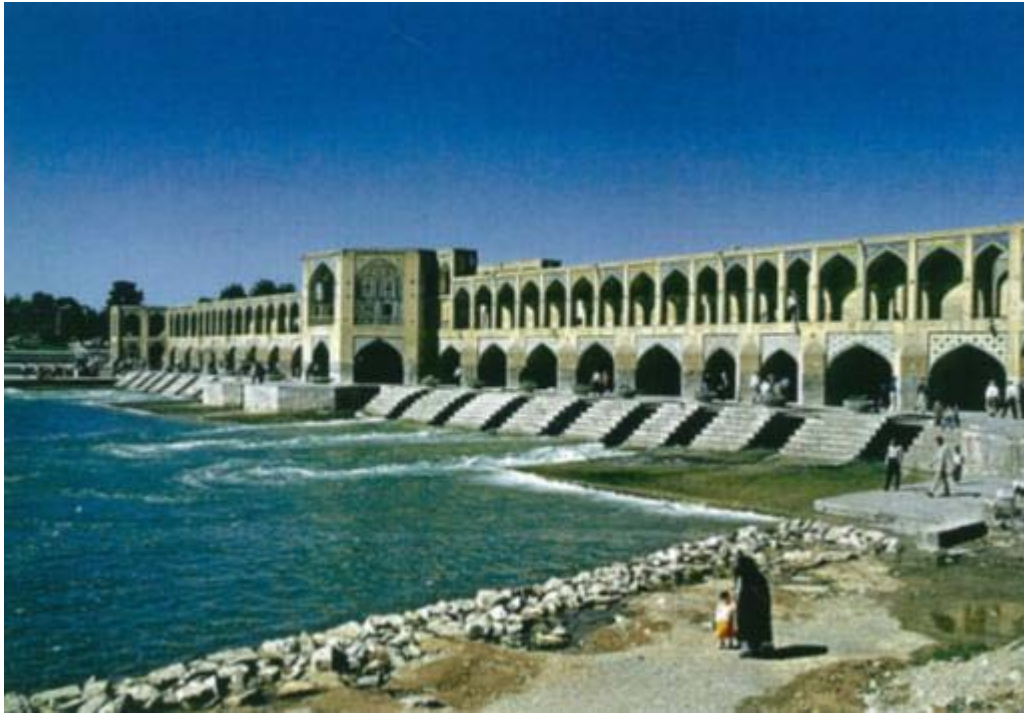


Figure 11 - The Khwaju Bridge a gathering place on top of water, Isfahan, Iran (1642-67). (Blair and Jonathan Bloom, 2009, pg.9)

More tangible than space, it is even more elusive for two reasons: first, because this water has a nearly unlimited ability to carry metaphors and second, because water, even more subtly than space, always possesses two sides."<sup>19</sup> The Khwaju Bridge at Isfahan, Iran is most notable because of its multi usages of twenty-four arches with its covered arcades for human access, there are also specific lanes for pedestrians and caravans with steps down to the water on the lower side of every pier for access to the ground and the water. The pavilions are venues for many social gatherings to view the beautiful Ziyandu River.<sup>20</sup>

<sup>19</sup> Ivan Illich, *H2O and the Waters of Forgetfulness*, United States: Heyday Books, 1985), 24.

<sup>20</sup> Sheila Blair and Jordan Bloom, *Rivers Of Paradise Water In Islamic Art And Culture*. (United States: Yale University Press, 2009), 9.





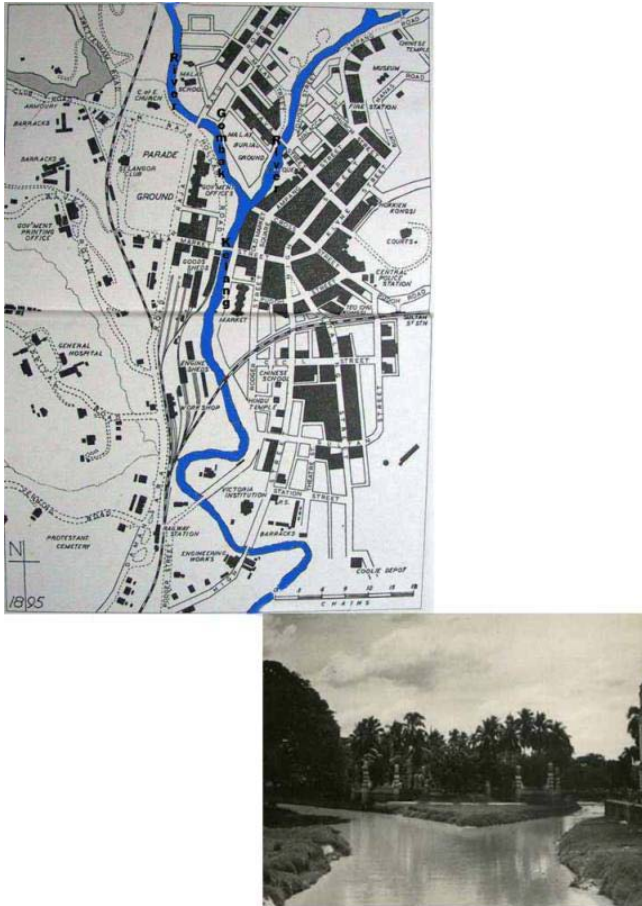


Figure 13 - The Gombak/Klang River running through Kuala Lumpur center.  
(<http://www.viweb.freehosting.net/viOldVI.htm>)



Figure 14 - The Gombak River is now little more than a drainage canal.  
(<http://www.viweb.freehosting.net/viOldVI.htm>)

## Island of Penang (Pulau Pinang) - Malaysia

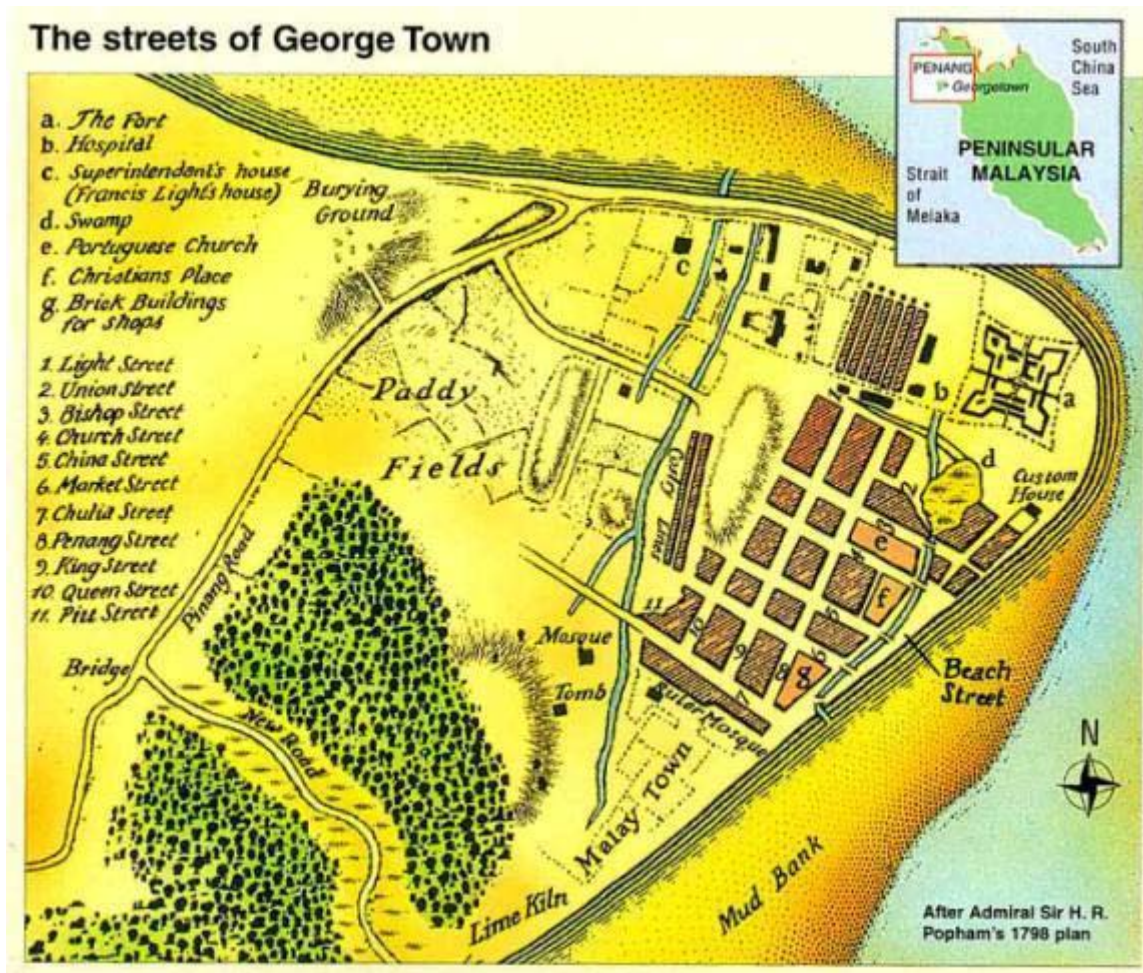


Figure 15 - Plan of Georgetown, Penang, 1798. (Fee, 1998, pg. 64)

Penang is known as the Pearl of the Orient because the shape of the island is similar to a pearl. The most exciting part of travelling to Penang is the ferry boat rides from Buttersworth on the mainland to the island of Pulau Pinang because of the spectacular views from the skyline of Georgetown to the thickly forested mountain on Pulau Jerejak (Jerejak Island once a prison has now been converted into a resort island for locals of foreigners to visit).

The coastal front within the city's centre of Georgetown is another attraction for both locals and visitors for its exciting scenery. There are many food hawker stalls lining the roads



along the coast, shopping complexes, cinemas and resort developments. Colonial architecture and traditional Chinese architecture are World Heritage structures. The Tongkay boats which line the seafront are constantly docked next to the houses on stilts along the Bayan Leppas coastal roads. These waterbourne settlements originated from the Chinese Tongkay seamen who have settled down since their ancestors first arrived; without this daily scenery along the Bayan Lepas highway the essence of Penang's coastal life would be lost. The down point to Penang is although the coast line is used as interaction between public and the oceanfront, the waterways that flows through Georgetown are much like Kuala Lumpur's Klang and Gombak river confluence, it is reduced to an unsavory drainage canal.

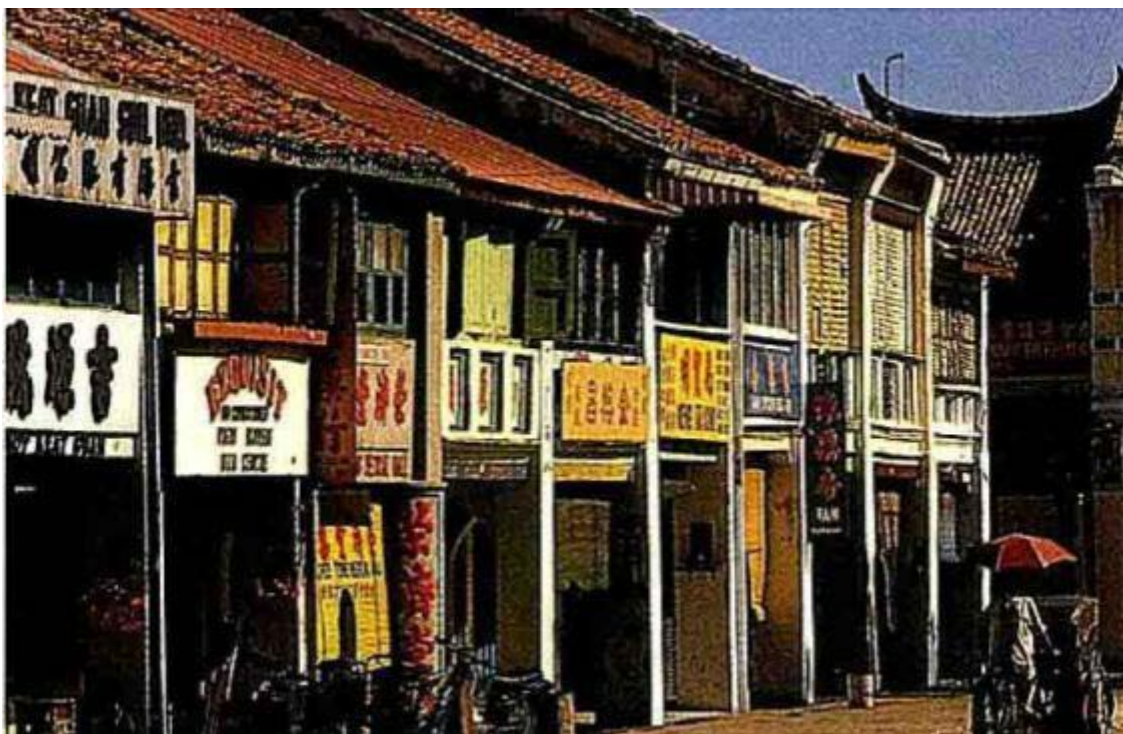


Figure 16 - Chinese shop houses along Penang's many lanes (Chen Voon Fee, 1998,pg. 90)

Melacca and Penang, like Singapore were founded by the British in colonial times when Britannia ruled the waves. In the battle for supremacy the British succeeded in replacing the Dutch and the Portuguese. England took control of Singapore, Melacca, Penang and Hong Kong; all waterfront, oceanfront trading ports and which together with India became the Crown Jewels of the British. Thus the vibrant mesh of Indian, Dutch, English, Portuguese, Chinese and local styles is evident in the Chinese shop houses and the English colonial buildings. Many of these small and quaint lanes of shop houses still exist today because the government and people take pride in their old traditions and understand the value of its history unlike the Thais at one point in time where they believed that traditions had no place in Thailand's future development "The drive for modernization seemed to mean that all vestiges of the former ages had to be brushed aside, as though "rustic" and "traditional" were pejorative terms mirroring the kind of embarrassment one reserves for gauche relatives who mortify one in public."<sup>21</sup>

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<sup>21</sup> Steve Van Beck, *Thailand Reflected In A River*, (Hong Kong: Wind & Water Ltd., 2004) 250.

# 4

## **SELECTION OF PLACES OF IMPORTANCE TO THE REDEVELOPMENT FOR CHIANG MAI**

## Bangkok - Chao Phraya River:

The Chao Phraya River embankment in Thailand is a place of significance because of what can be learnt from the past. In the land use diagram labeled Bangkok in 1901; the khlongs which defines the Rattanakosin Island made up of state buildings including the Grand Palace Complex creates a sense of hierarchy. In the diagram labeled Bangkok in the present the congestion of the concrete roadways have overshadowed Rattanakosin Island. Water is no longer the highway of commerce and trade but the roadways have become the clogged arteries for commerce. I would like to point out that this is a significant problem that must be avoided for the Chiang Mai design project. The present state of the river development is not where points of design development for Chiang Mai shall be extracted. It is the past technique of river development that is most interesting.

In the past khlong communities came about from the many khlongs and with the temples located by the water; open plazas for gathering, festivities and socializing happened there. People lived on and from the river. Creating this old way of life in the Chiang Mai project is going to be addressed.





## Bangkok's Chao Phraya River and its Waterways - Thailand



Figure 19 - Floating food vendors in Khlong Bangkok Yai are more common in these waterways, but few are seen on the main body of the Chao Phraya. (Hamburger, 2008, pg. 47)



Figure 20 - This vendor is in a less welcoming venue to work in this khlong. (Hamburger, 2008, pg. 33)

Bangkok's perspectives about the riverfront have changed dramatically over history, from lush green mangroves to polluted water arteries. Once locals living on the river would tell stories of how the water was clean and clear that they could see the red eyes of the shrimps and

catch them. People would drink, swim and bathe in the river “When I was young, we bathed in the khlong, and also collected water to keep in jars for drinking and cooking.”<sup>22</sup>

Not anymore nowadays, except for a few how have grown immune to the polluted conditions of the Chao Phraya River. Floating markets were once a common sight on the river, now only a handful exists in the khlongs (waterways which branches from the Chao Phraya). Many of these khlongs have been filled up by roads and are greatly missed by the people who remember them. The village life that inhabit the existing khlongs today are still vibrant and offers many young Thais and visitors a glimpse of traditional Thai Khlong life. “Our community is close-knit. We also believe in spirits. Neighbors think that my house has strong spirit protection. During World War Two, the Allied army tried to bomb a naval base not far from here, and they tell us that a monk, or spirit of a monk, stood on our roof and waved the bombs away from our house. When there was a fire last year, some people told me that they saw a ‘Singha’, the legendary Thai lion, blowing water on our roof. So that must certainly have saved us.”<sup>23</sup> The people who still live in these khlongs still cherish this lifestyle (some still swim and bath in the rivers) but the conveniences of Bangkok’s urban jungle are attractive to them as well.

The Chao Phraya River was the venue for King Bhumibol’s coronation in 1950, where water was gathered from 18 sources including the Mae Ping River to perform a water deed. Until 1932, water was used to proclaim fealty to one’s sovereign. Nowadays many Thais dare not come in contact with the river as they are worried about pollution and disease. The evolution in which the Traditional Thai khlong life has taken is not completely friendly to the environment as the water gets more polluted because the households along the khlongs dispose

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<sup>22</sup> Pamela Hamburger, *Khlongs: Thai Waterways and Reflections of Her People*. (Bangkok: Bangkok Book House Co., Ltd, 2008),45.

<sup>23</sup> Pamela Hamburger, *Khlongs: Thai Waterways and Reflections of Her People*. (Bangkok: Bangkok Book House Co., Ltd, 2008),18.

many of their rubbish into the khlongs. During the time when there were many water spirit pavilions along the waterways the Thai people wouldn't dare of littering the waters in fear of bad luck or death. Places of worship are stilted structures on the river and the seating are made up of boats that crowd around the structure, when the sermon is over the seating area goes back to being a khlong, now because of modernization and the forgetfulness of their own beliefs the waters no longer represent the home of a spirit or deity that would wreak havoc to those who would litter or act disrespectful towards it. If there was a solution in maintaining the relationship these present villages have with water and removing the vices of throwing things into the river and cleaning their dishes in it; the relationship between the two would become healthier. Remind them of their relationship with water.

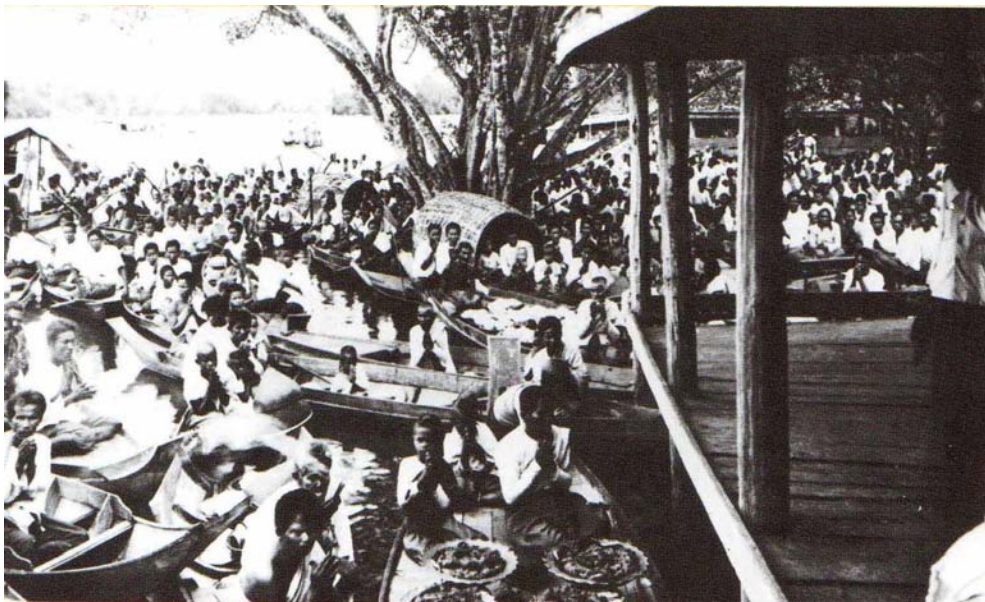


Figure 21 - Buddhist worshippers sit in their boats to listen to an abbot give a sermon 100 years ago. (Beck, 2004, pg. 209)

When European foreigners first arrived in Bangkok during the 1800s they were pleasantly surprised by the lively scenery of the aquatic dwellings and they even bestowed the sobriquet of "Venice of the East" for Ayutthaya and later to Bangkok because of the dazzling

canal'streets and floating houses. British envoy John Crawford described this scene on his first arrival in Bangkok in 1825: "On each side of the river there was a row of floating habitations, resting on rafts of bamboos, moored to the shore....The number of these struck us as very great at the time, for we were not aware that there are few or no roads at Bangkok, and that the river and canals form the common highways, not only for goods, but for passengers of every description. Many of the boats were shops containing earthenware, blachang (fish sauce, a condiment), dried fish and fresh por. Vendors of these several commodities were hawking and crying them as in an European town."<sup>24</sup>



Figure 22 - Popular Water taxi on the Chao Phraya River (Beck, 2004, pg. 57)

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<sup>24</sup> Steve Van Beck, *Thailand Reflected In A River*, (Hong Kong: Wind & Water Ltd., 2004), 200.

Today, Bangkok has suffered from the allure of speed, efficiency and modernization. For a few decades Thailand was mesmerized by the concrete towers and emulated for Shanghai's or Hong Kong's skyline, bridges were built loftily over rivers as if to overpower and compete with the Chao Phraya's majesty. Many klongs have been filled up to make way for skyscraper condominiums and roads. Only recently have the Thais become aware of the situation of forgetting the past with the trend of eco-tourism and 'green thinking', because of that the concept of looking at water has become more viable. The many temples and Thammasat University beside the Chao Phraya River is part of what keeps the interesting activities along the river because of the riverside markets beside it that have many food and shopping stalls which attracts the University's students and faculty as well as visitors as well. Attempts have been made to address the issue but not many have been successful an example would be the many walkways that have been placed along the riverbanks "Narrow, unshaded, and positioned five meters from the (Chao Phraya) riverbanks they parallel, they seem more of a compromise than a real attempt to re-establish the link between the river and the city."<sup>25</sup>

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<sup>25</sup> Steve Van Beck, *Thailand Reflected In A River*, (Hong Kong: Wind & Water Ltd., 2004), 255.

## Places of Significance and Integrity: Malacca – Malacca River

### Malacca River Development

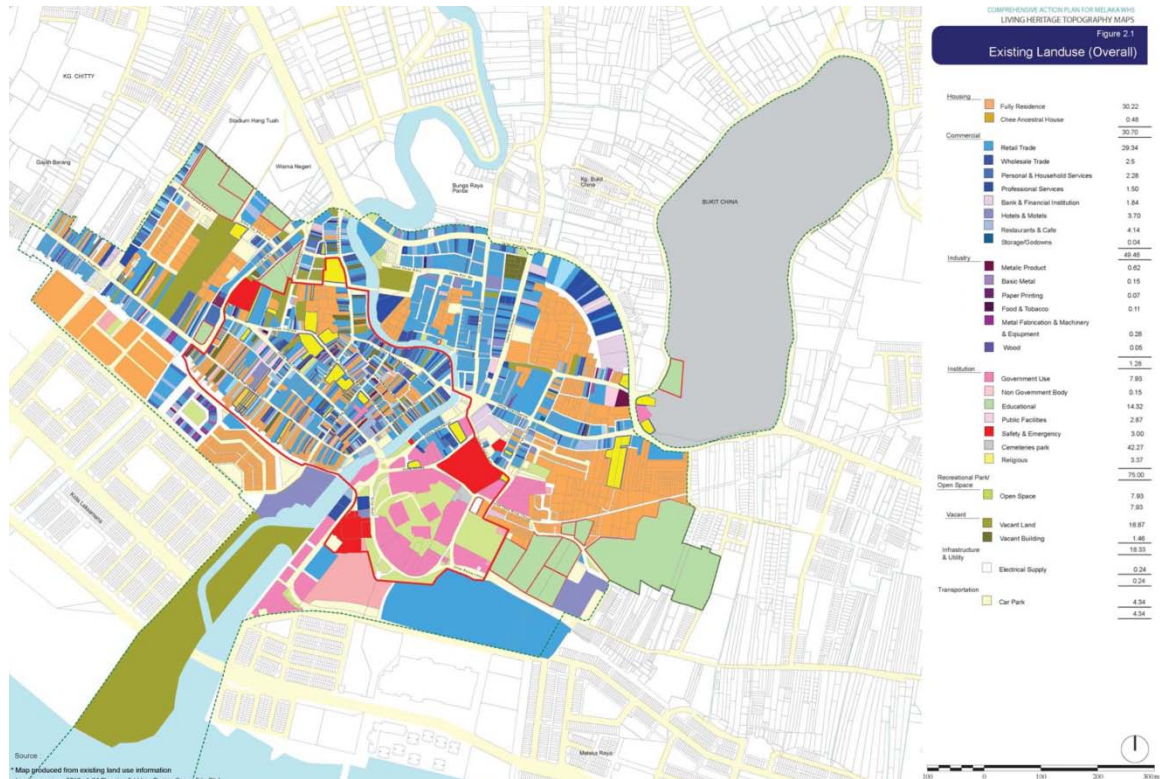


Figure 23- Existing Landuse. (Government of Malaysia, 2011, pg.33)

Malacca was chosen because it has many similarities to Chiang Mai. Both are cities with diverse cultural influences and both have settlements along the water's edge. What is of significance is the contrast between the old, historical zones and the newer developments on different sides of the river, the institutions and civic buildings are on the eastern side of the river which is the same as Bangkok's Chao Phraya River. The government of Malaysia was worried about Malacca losing its sense of heritage and forgetting its waterfront past for post and trading; so they proposed a series of redevelopment and new development phased projects to improve Malacca as a tourist, visitor and resident friendly place. This was to be achieved by the



beautification of the river and creating many pedestrian landscaped gardens and parks along the river. By protecting planning uses within the oldest part of the city (Historical Residential & Commercial) with building restrictions and invite visitors to walk inside this zone by introducing Jonker Plaza, thus it becomes more pedestrian friendly for the future.

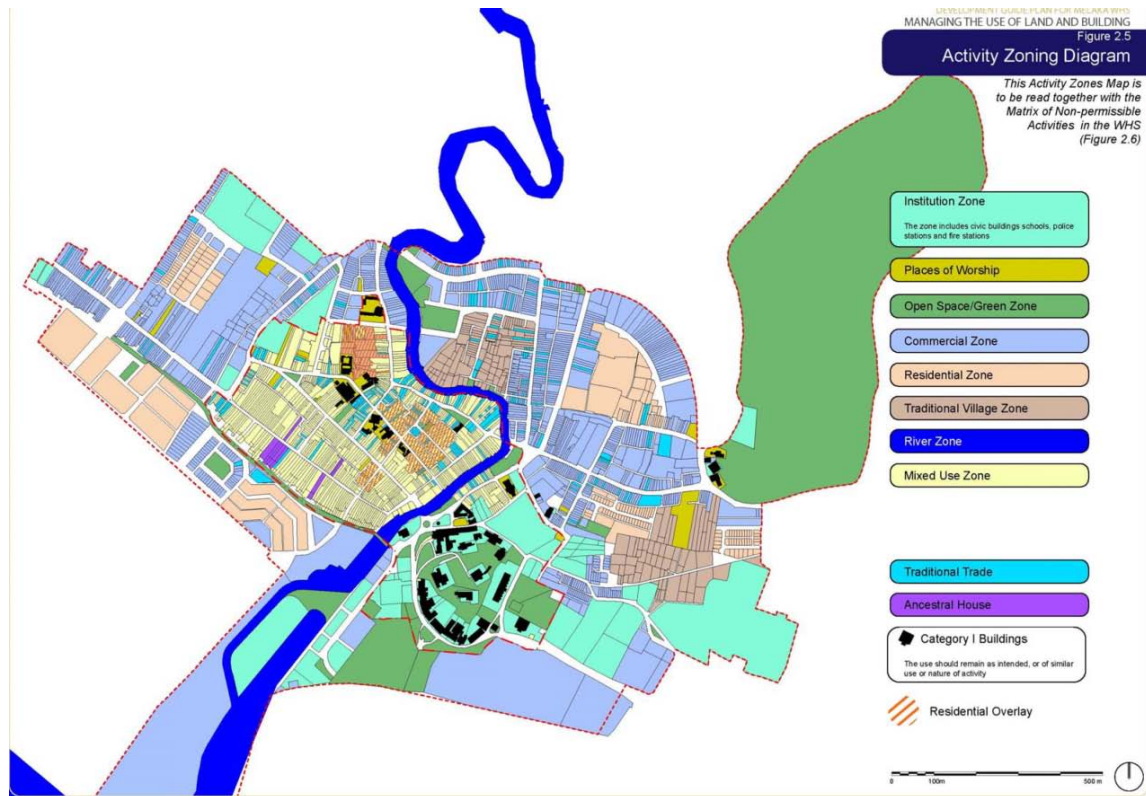


Figure 24 - Activity Zoning Diagram. (Government of Malaysia, 2011, pg. 53)

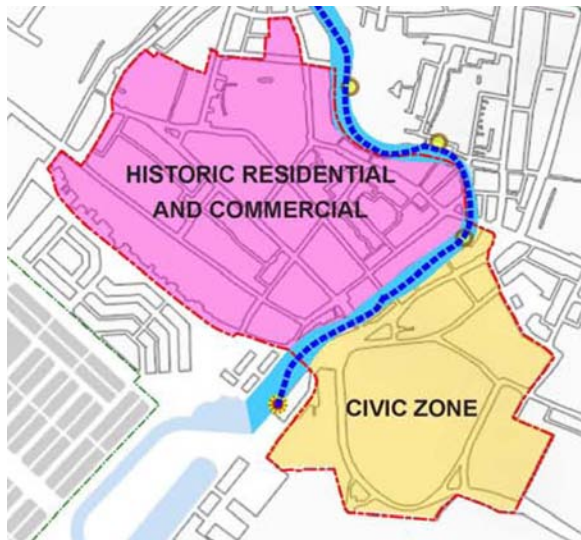


Figure 25 - Zoning Map. (Government of Malaysia, 2011, pg. 12)



Figure 26 - Development Projects Map. (Government of Malaysia, 2011, pg. 16)



## Development Projects:-

### -Parks and Plazas:

A1: Heeren Linear Park (New)

A2: Jalan Kota Linear Park (Upgrade)

A3: Padang Nyiru Park (Upgrade)

A4: Kampung Pantai Plaza (New)

A5: Jonker Plaza (New)

A6: Market Plaza (New)

### -Pedestrian Priority Street:

B1: Lorong Gereja Upgrading

B2: Jalan Istana Upgrading

B3: Linear Park Pedestrian Bridge

### -Waterfront Promenade:

C1: Connect and upgrade the riverwalk to Melacca central

### -Backlane:

D1: Backlane improvement (upgrade)

-Car parks:

E1: Jalan Masjid centralized parking (New)

E2. Parking at Jalan Banda Kaba (Upgrade)

E3: Parking at Jalan Bendahara (Upgrade)<sup>26</sup>

The Development Projects that are introduced to the city above is what is significant for me to propose for the Chiang Mai design part. Malacca is a historically rich city but at the moment is not pedestrian friendly and polluted from traffic congestion, much like Chaing Mai's waterfront. What is interesting is the future plans the government proposes aiming to highlight their architectural and waterfront heritage.

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<sup>26</sup> Government of Malaysia, *Conservation Management Plan And Special Area Plan*, Proposed Public Realm Projects, pg. 5-3, Map diagram.

# 5

**Chiang Mai - History, Present Strength,  
Defects & Her Future**



Figure 27 - Before the waterways were filled with waterbourne villages. (Beck, 2004, pg. 201)

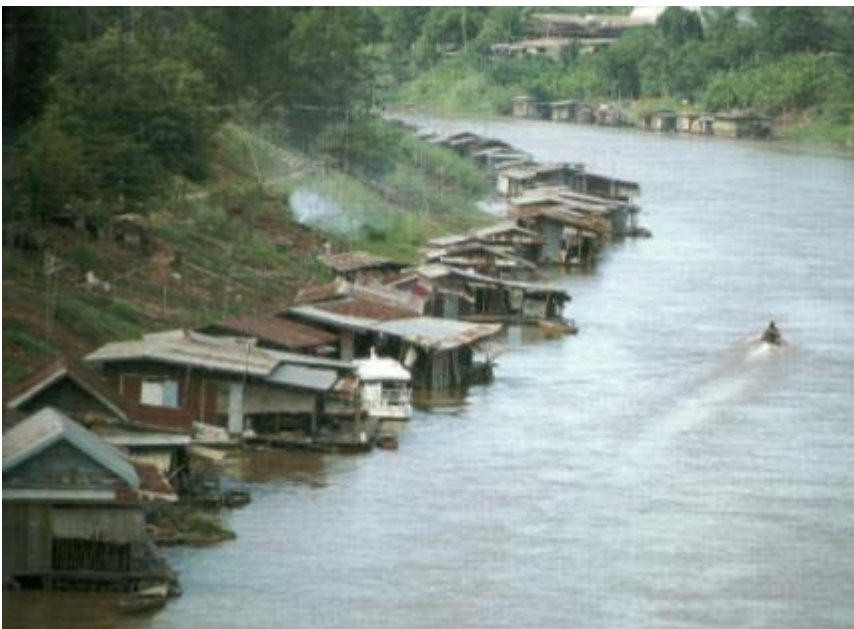


Figure 28 - One of the few remaining floating community in Northern Thailand on the Nan River. (Beck, 2004, pg. 201)12

## Chiang Mai

Chiang Mai was founded in 1296 by King Mengrai the ruler who first unified the northern part of Thailand to form the Lanna kingdom. Lanna stands for “The Kingdom of a Million rice fields”<sup>27</sup>. Chiang Mai sits at a strategic position between the Kok and the Ping river basins for economic growth and protection.<sup>28</sup> Lanna is a culture where nature is central to the everyday life of the Thai people. Chiang Mai was a center of Theravada Buddhism at the time of King Mengrai which makes its location perfect for communication and information (arts and crafts) as Northern Thailand sits at a major crossroads of Southeast Asia, a ‘mountain-meets-rivers nexus’<sup>29</sup> where people from China, Laos, Myanmar and Thailand have traded goods and cultures since, using animals (horses and elephants) and rivers for transportation. It took over seven hundred years for the Lanna way of life to develop.

Lanna is famous for its handicrafts, from paper parasol umbrellas (in different colors and sizes), intricate woodcarvings, musical instruments, and silverware to name a few. The inspiration for these handicrafts came from nature, for example scenes of Buddha among nature and wildlife are depicted in wood carving and in gold leaf patterns. Many believe, this aspect has helped to attract tourists, which is why this particular tradition continues.

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<sup>27</sup>Joe Cummings, *Lanna Renaissance*. (Chiang Mai, Dhara Dhevi Hotel Co. Ltd, 2006), 11.

<sup>28</sup>Hugo Rincon and Dwita Rahmi, “Preservation of Cultural and Historic Heritage as a tool for sustainable development”, in in *Managing Intermediate Size Cities Sustainable Development in a Growth Region of Thailand*(Aldershot: Avebury, 1997), 297.

<sup>29</sup>Joe Cummings, *Lanna Renaissance*. (Chiang Mai, Dhara Dhevi Hotel Co. Ltd, 2006), 11.

Lanna art and architecture are based on the factors below which influence the style:

Animism:

The people of Lanna have had a close relationship with nature, many times the Lanna people have to abandon their dwellings in the villages to the forest and mountains of Chiang Mai because of other invading civilizations but they always returned with new knowledge of how to live alongside the wilderness. Indigenous forests filled with wild elephants and tigers contributed to the animism prominent in Lanna arts and crafts. In temple motifs were forest scenery that represents northern Thailand in a time when there were more forests than villages. Animals that symbolize water and land are depicted along the palace and temple walls. The nak's image inspired by the water bodies that curves through the land can be seen at the end of the bargeboards at temples and at the top of gables. "This aquatic symbol permeates the daily life of people everywhere on the 'Asian water front' in mutated forms."<sup>30</sup> Statues of sang are found in temples which is a cross between the nak and a lion to connect water and land.

Tying saffron clothes around giant Gum trees is a tradition that is a common sight in Chiang Mai, especially along the Ping River. The trees were not always covered in the saffron clothes with incense sticks stuck in the ground in front of it, the residents who lived in that area made it happen when the Highway Department wanted to widen this road along the river and cutting down the hundred years old trees; the residents objected to the idea because it is said

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<sup>30</sup>Sumet Jumsai., *Naga Cultural Origins in Siam and the West Pacific*. (New York: Oxford University Press, 1988), 16.

that the trees were planted by the princesses of Chiang Mai and Lampoon.<sup>31</sup> The giant trees were part of a unique atmosphere that Chiang Mai is slowly losing so the residents got together and paid their respects to the trees as their ancestors did in fear of losing their part of nature which took many years to grow. Now the space is more than a picturesque part of town; it has become a place of spirituality as well. In other cases spirit houses that builders use to bless and protect their construction worship to the Goddess of Rivers (Mae Thoranee) and the Goddess of Earth are used in most of the construction in Chiang Mai. Even an old well on a site cannot be removed when building a structure for fear of bad luck.

#### Architecture:

Lanna architecture is a mixture of influences from its close proximity to neighboring countries such as Cambodia, Myanmar, Vietnam and China. As most Lanna residents were rice farmers the residential housing style called Ruen Kalae house which were built along rice paddy fields or close to the rivers. The house is made completely out of indigenous teak wood, is built on stilts elevated 8 feet above the ground with a void to allow water to go through during monsoon seasons. Its name means 'kalae house' ruen is house and kalae is the V-shape wood design at the end of the bargeboards. The high pitched roofs provide efficient stacking ventilation for the interior of the house. The void area below multi-purposed from a working space for women to work on their looms or as a kitchen/storage area holding rice baskets, the elevation of the living areas also provides protection from the wild animals that used to roam northern Thailand. Allowing the floods to pass through the land was necessary to the lifestyles of the Thai people. Which is why I believe that it is important to consider why the design of an individual building in a wider context in which the building is located, does it fit in its contextual

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<sup>31</sup> Gerald and Khanitha Roscoe, *A Portrait of Chiangmai Towards the year 2000s*. (Thailand: Li-Zenn Publishing Limited, 2011), 62.

surroundings? This can help in the future planning for Chiang Mai and places that have asked themselves this question.

Local traditions, nature, especially water and mountains, and climate of the location are important factors in Lanna architecture, emphasizing simplicity and functionality. In the construction of a seaworthy house the whole village is needed to go through the ceremony of invoking the Naga through a formula to bless the construction of the house and guarantee the longevity of a house. An astronomer and a monk are needed to say the prayers as well as judge whether the location for the house is suitable or not.<sup>32</sup>

Lanna Architecture however is constantly evolving from dwelling in caves to integrating multiple influences, up till today. Now contemporary Lanna Architecture is re-examining itself whether it has been true to its belief in respecting and being flexible with nature.

#### Urban Typology:

Chiang Mai was initially built similar to the Chinese organization of building where the north to south axis is for palaces and temples. The temples and palace along that axis is now destroyed and replaced by a school and prison. Now within the west to east axis is more significant because the most popular temple (Wat Phra Singh) is located almost against the western moat boundary with a direct line to the Tha Pae Gate. The moat is a fairly gridded system with narrow sois (lanes) within the square clusters. Through urban redevelopment the sois become tighter and more dead-end for small boutique hotels and bars (as can be seen in the Night market District diagram above) and were not as loosely clustered as it was in the past.

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<sup>32</sup>Sumet Jumsai. *Naga Cultural Origins in Siam and the West Pacific*. (New York: Oxford University Press, 1988), 92.



Beyond the moat is a linear system with branches of district branching north or south of it. A more loosely developed building organization of these clusters from the Tha Pae Road follows a traditional method of Thai urban development. During the 14th century many of the buildings within the moat walls were temples, government and palace buildings. Then after the 14th or 15th century a more eclectic mix of peasant residential, commercial and institutional buildings came about with the moat walls against enemy forces. Throughout the ages the most significant changes was a loss of parts of the ancient outer city walls, water basins, streams, vegetation areas, and small clustered buildings; those small clustered buildings of shop houses have been replaced with bigger structures, mostly big resort-like hotels by the Ping River which does not allow access to the public, so residents of Chiang Mai can't make use of the water's edge in front of the hotel. Because water fronting land has such high value for potential views it would be good to promote public gathering spaces along water. Water is a magnetic element that attracts people, especially the running waters of the Mae Ping River is a powerful and rhythmic pulse that the city of Chiang Mai should appreciate.

Even in the case of the Cheonggyecheon canal the civic spaces along the water has proven successful in South Korea; the canal is manmade and water has to be pumped from a nearby river to keep constant water depth. Chiang Mai has something more impressive than a canal; it has a tributary from the 'river of kings'. I see the sites as something with great potential for public spaces.

## Mae Ping River

The Mae Nam Ping River is a major river flowing through Chiang Mai. In the past the river was heavily polluted, however recently the water quality of this river has improved greatly when a dam was built upstream from the city aiding to dilute the water's contaminants and somewhat lessening the affects of its annual flooding. The housing communities along the Mae Ping River have also improved their waste removal systems thus the river is less polluted because less houses are dumping domestic wastes into the river.

## Mae Ping River Morphology:

The Ping River morphology study diagrams to pin point how the Ping River has changed over the years:



Figure 29 - Old Map of Chiang Mai. (Planning Department of Chiang Mai, 2011)

- The first image is Chiang Mai 700 hundred years ago where the Ping River was allowed to fill up the dugout basin to irrigate the rice paddy fields and its amorphous shape. There were many wetlands and water bodies before.

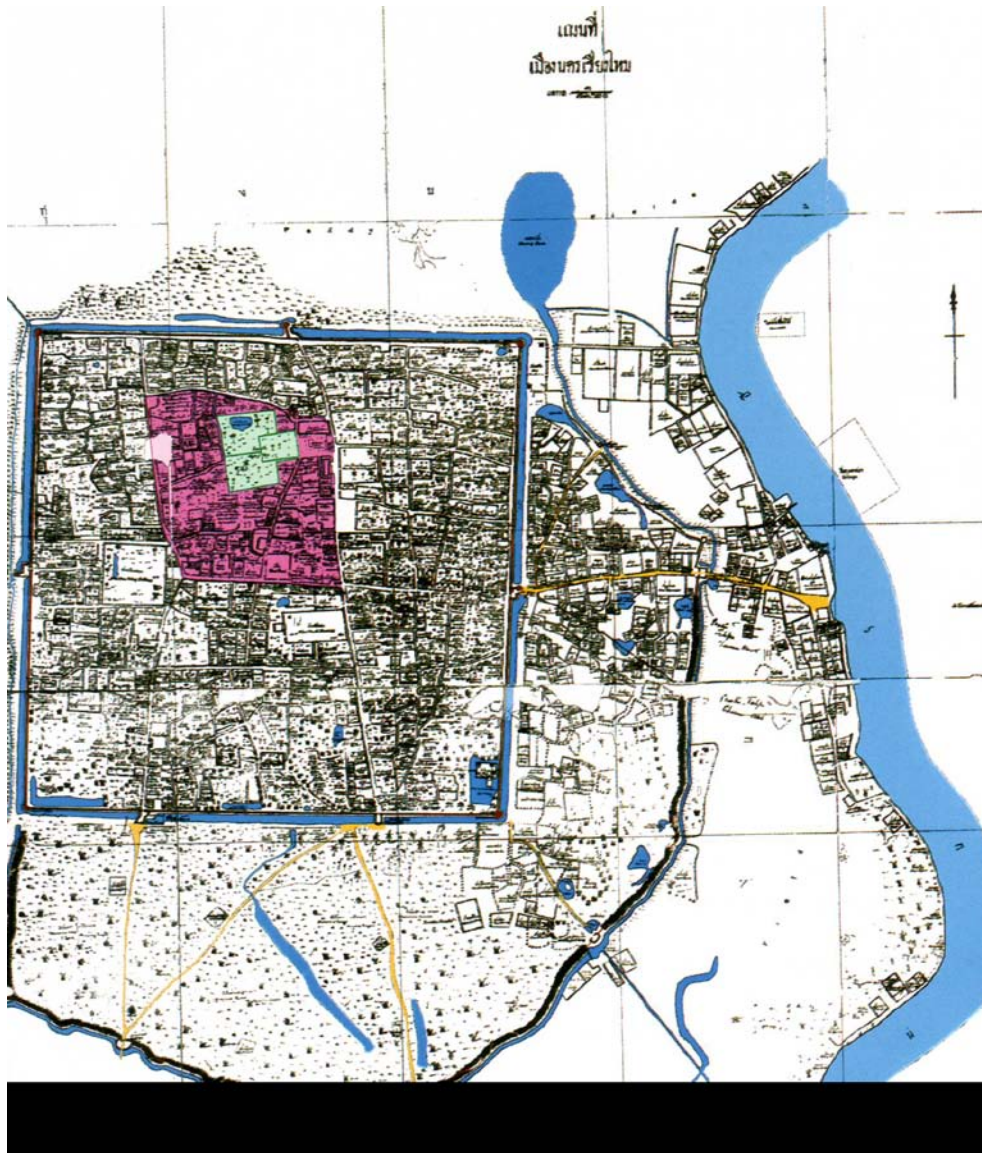


Figure 30 - Map of Chiang Mai drawn in 1897, commissioned by James McCarthy, the first Director of the Military Department of Siam (depicting the Big Pond). (Planning Department of Chiang Mai, 2011)



The second image is when water has become more controlled with retention ponds and wetland spaces.



Figure 31 - The Mae Ping River most of the time.

- The third image is the shape of the river most of the year.

## Chiang Mai's Future Driving Forces

Constraints & Opportunities:

Constraints	Opportunities
Increasing air pollution, annual floods as Mae Ping River becomes narrower	Beauty of natural environment
Inappropriate preservation techniques	Cultural & historical centre of Northern Thailand
Decline of creativity in handicrafts	Education & healthcare hub
Somewhat isolated and landlocked	Growing International Airport
Poor public transportation system	Elevated mass transit link and railway line from Kunming, China

Figure 32 - Table of constraints and opportunities of Chiang Mai

These are some assumptions on how Chiang Mai's future will change 50 years from now (2060). Based on the growing trend of many Thais and expatriates settling down in Chiang Mai there will be slumps in economy which have been overcome. Assuming that Chiang Mai becomes a more healthier and greener city because it is now and they are improving the problem of air pollution to its environment from gas emissions from automobiles and slash-and-burn techniques used on farmland. Chiang Mai will become more environmentally and culturally sustained.

Population	Growing
Energy	Abundant
<b>Economy</b>	Entrepreneurial - NGOs from the community with support from the government developed the project and maintained it/ The medical tourism sector is also booming for Chiang Mai's international standard healthcare and hospitality industry and salubrious environment
<b>Environmental</b>	Improved - The flooding issue has been addressed by accepting the dynamic nature of water/ The Lanna culture in respecting and learning from nature has re-emerged
<b>Culture</b>	Growing- Both tourists and locals are looking out for the preservation and creative development of Lanna culture; both tangible and intangible
Technology	Developing
Governance	Continuing in corporation with entrepreneurial communities

Figure 33 - Table of Chiang Mai's 7 Driving forces

Further discussion on the driving forces that would make this project viable:

City governance - Chiang Mai as a city is aiming to become a greener and pedestrian friendly city. The government values its historical communities and supports the lessening of the use of cars and more green areas. Therefore using Wat Gate Community as the first prototype community in Chiang Mai and Thailand would be a great example for other places in Thailand to learn from. The City government realizes that the Mae Ping River has lost its significance to

Chiang Mai culture believes that the river should be brought back to the foreground in daily life. Land along the river will be allowed for public use.

Climate - more people from the congested cities in South East Asia like Bangkok, Korea and in particular Japanese retirees add to the number of residents who come to Chiang Mai for a second home or move to Chiang Mai for its cool and comfortable winters. The rest of the year can be described as a tropical wet and dry climate with cooler evenings. Chiang Mai has high tourism potential, 1.4 to 2 million foreign tourists per year, the definite trend is one with high growth rate, especially for the medical tourists.

Neighborhood Community's and private entrepreneurship - the majority of Wat Gate residents are educated and wealthy. They have proven their dedication to the community by successfully preserving the structures (Wat Gate Temple, Mosque, Prince School and traditional shop houses) in their area. They wish to improve the appearance, functionality and quality of their circulation from the residential space to public space. There are community-based organizations including Wat Gate Conservation Club established by community residents, the Lanna Architects Association and the Social Institute of Chiang Mai University are dedicated to safeguard the cultural heritage of Wat Gate. They have already succeeded in preserving and maintaining the old shop houses, the pavilions and improving the visual quality of the street running parallel to the river. They are ready to support this riverbank improvement project.

New Economic Revenues - Along with the government support private entrepreneurship of the community, there are economic revenues to sustain the improvement. To make the park spaces be more self reliant there will be public admission fees to enter the area and other user fees for using the river facilities.

Chiang Mai's tertiary education is very popular in the S.E.A region , foreigners who come to further their education, search for employment and then stay in the city, as well as Thai students from Bangkok who come to study and work in Chiang Mai. Having a University by the river in studying Lanna culture and environmental sustainability is what the site needs to bring the next generation to the site to study and hang out.

Medical facilities in Chiang Mai are prospering with many international hospitals and medical universities, many Thais and foreigners go to Chiang Mai for rest and recuperation because of these medical facilities and the clean, pleasant environment.

### Further Driving Forces Influencing The Future Of Chiang Mai:

- (1) The near proximity of dynamic China the most populous and fastest growing economy in the world.
- (2) The present Prime Minister of Thailand Yingluck is from Chiang Mai and she wants to develop Chiang Mai very much in the way her brother the previous Prime Minister of Thailand wanted to do. As evidence of this right now at this moment<sup>33</sup> she is signing a host of agreements with China to develop bilateral trade between the two countries to the tune of US\$100 billion in the next 5 years.
- (3) A superfast train service to connect Southern China Kunming to Chiang Mai is one of the main items. This superfast train service from China would transform Chiang Mai into a major international hub and boost every aspect of Chiang Mai's economy and the property market.

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<sup>33</sup> *Washington Post Report by AP Published 17 April 2012*



- (4) The increasing influx of tourists now over 5 million visitors a year among whom are some 2 million foreign tourists. Increasing number of Chinese tourists and even Arab Muslim tourists can be seen at Chiang Mai Airport.
- (5) The cool climate in the winter months is a powerful attraction for visitors to Chiang Mai. An increasing number even choose to retire and live in Chiang Mai.
- (6) The rich cultural Lanna heritage in architecture and handicrafts is also a powerful driving force. So is the variety of ethnic tribes in Chiang Mai.
- (7) The wealthy display of flowers and the various Royal Patronage projects also draw visitors to Chiang Mai.
- (8) Last but not least Chiang Mai's unique ancient walled city in the shape of a perfect square wall of red bricks surrounded by a moat is a perpetual delight and reminds everyone of the rich history and culture of this Northern Thai City.
- (9) As Bangkok and other major cities become more congested with people and cars and the high cost of living Chiang Mai would increasingly look more and more attractive to live, work or retire.

# 6

## Site Analysis

## Wat Gate (Foreigner District) Site Analysis

Population of Chiang Mai City: 148,477

Population of Chiang Mai Metro: 960,906

Population of Wat Gate Community: 24,094

It is a community that has its core community system based on the ancient temple called Wat Gate Karam some locals call it the Foreigner District as well. This community has very vocal citizens who "desire a content and peaceful life more than economic prosperity."<sup>34</sup> From interviews with the residents, they are disappointed by the poor walkway conditions and lack of it along the water and the heavy traffic in narrow lanes which they do not want to widen. They want better footpaths and recreational spaces.

The residents take pride in the survival of their intangible and tangible traditions because of many qualities that have continued since before, such as the Scorpion-Tailed Boats that runs parallel to the community on the Mae Ping River, and the Wat Gate historical museum set up with the help of its close-knit and diverse residents. The community is made up of many religions and beliefs which the original craftspeople and foreigners who first arrived in the area brought to the community. Altogether there are 17 places of worship that was gradually built over the course of 700 years. Among the beliefs and religions in this community is Buddhism, Islam, Sikh and Christianity which have left their own marks behind such as the Sikh Sri Guru Singh Sabha Mosque which sits next to Buddhist Wat Gate Temple and across the Mae Ping River is the Chinese Temple in Kad Luang.

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<sup>34</sup> Duongchan Apavatjrut Charoenmuang, *Sustainable Cities in Chiang Mai: A Case of the Wat Gate Area*. Chiang Mai:Chiang Mai Sangsilp Printing Ltd., Part, 2006), 15.

The residents in this area range from working class to the wealthy. However even with the difference in beliefs they have worked together on many occasions when their fellow residents have a problems such as flooding or renovating a religious structure. All in all they feel a great sense of ownership for the Wat Gate area because they have managed to preserve many of their old structures and have a strong residential and religious tie. They are sad that it is harder to get around on foot, more structures keep encroaching the river and the disappearance of greenery. They want spaces to go to for leisure activities such as aerobics, Tai Chi and chess areas along the river; for residents and visitors to enjoy. They have commented that the only place for them to see greenery is at the Ratchapruek Flora Expo an hour away from the city. Many of the people working in the market stalls in the market area are saddened that the river keeps on getting narrower.

#### Problem:

Land along the Mae Ping riverbanks is privately owned by residents with some government land for the municipal buildings and police station. The Chedi Resort that sits at the bank of the river just off the Night Bazaar Market is a development that has raised a lot of controversy from designers and the community. The issue is that this resort monopolizes the Ping riverbank; it prohibits public access to a beautifully landscaped development that is only for the hotel guest's usage. At the same time since the land along the banks aren't meant for the public then I think that the resort gives some opportunity for people to visit as long as they pay for something. In the opinion of the people (In Wat Gate Community) who live along the river they prefer the atmosphere of their small lanes which they believe prevents turning their community into a major tourist spot.

In my opinion it is not fair for the rest of the public because this probably a reason why the river is forgotten. I believe that a space must be allowed for public access as they have as much a right to view the waterfront. Unlike Bangkok's Chao Phraya River which is lined with government land some water fronting land can be given to the public to enhance to water's edge. Chiang Mai should stick to its traditions of the private housing along the water's edge but they need to give back to community by allocating some space for public uses. I think that it is good that they can voice their opinions but they should think for their community and city to have more social and cultural cohesion. With the difference in site context between the Mae Ping River and the Chao Phraya River the one that stands out the most is there is not a rich water culture by the Ping as in the Chao Phraya. Since the Mae Ping River is right there running through greater Chiang Mai they have a chance to start working with creating their own water culture which they have already begun with the restaurants by the river. At the moment the area might be dominated by pubs so the atmosphere is not as wholesome as it should be but it least something is happening there and so many young Chiang Mai people go clubbing there.

On the Warorot Market side of the riverbank there is a stretch of dead space behind the police station along the river until the Nawarat Bridge. A piece of land that is not developed and is inhabited by drug addicts. Along the riverbanks of Warorot Market up to the Municipal Building are concrete steps leading to a narrow landing towards the water, this area is only used during festivities during Loy Krathong and New Year's Eves where they release floating lanterns and sparklers. Other times during the year this stretch of concrete is empty. The parts that are decayed and inaccessible in the grey and red zones give opportunities for a green belt. The Mae Ping River was also wider in the past and because of urban sprawl it has narrowed down a lot from its original width. The grey area is the most interesting space because there are some structures which still exist there, such as the Police Station and Post Office. These structures can

work together with the seasonal water level fluctuation by either floating on the water when its flooded or the ground floor can be space that allows water to pass through with the higher levels for working space.

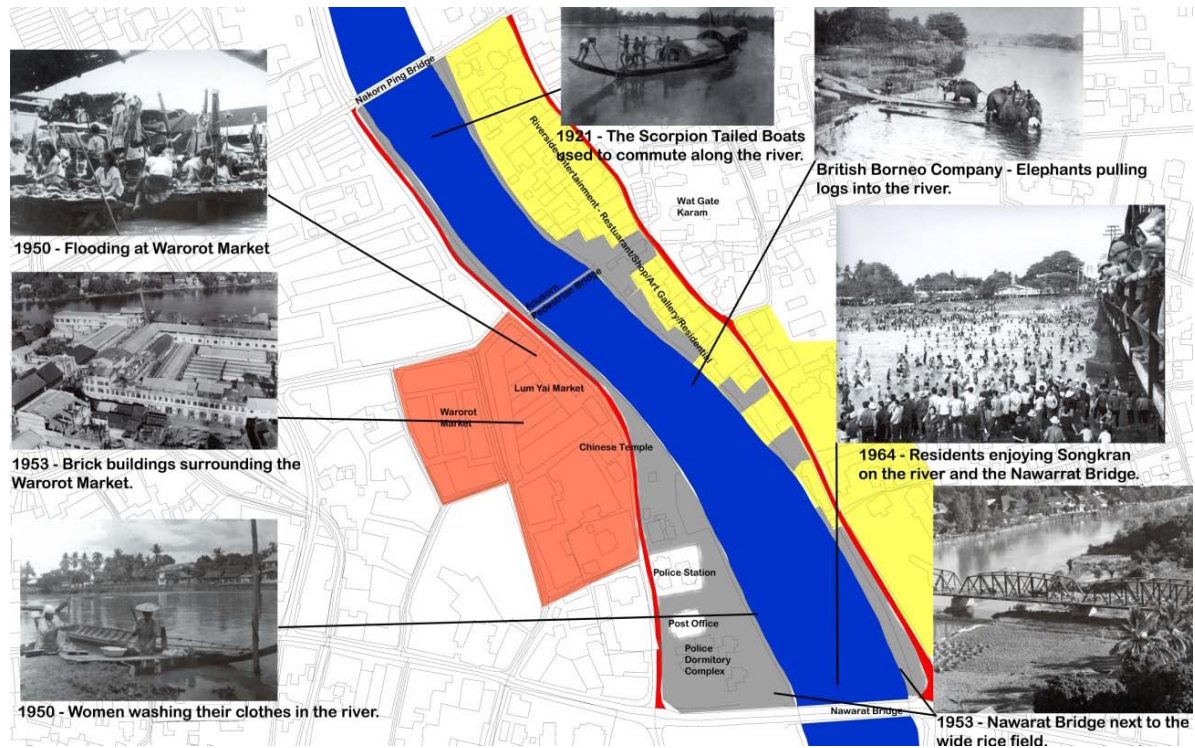


Figure 34 - Diagram of past images of Wat Gate Community



Figure 35 - Diagram of present scenes of the Kad Luang & Wat Gate spaces.

In closer examination the steps are not as easy to navigate as it seems; here are its disadvantages:

1. Separation of the Wat Gate District from its community market by the abandonment of Anusorn pedestrian bridge over the river.
2. The steps from road level are steep with no railings making it hard for anyone other than physically strong teenagers and adults to walk up and down.
3. The landings are narrow with no seating space.



4. No plants to break the monotony of grey concrete.

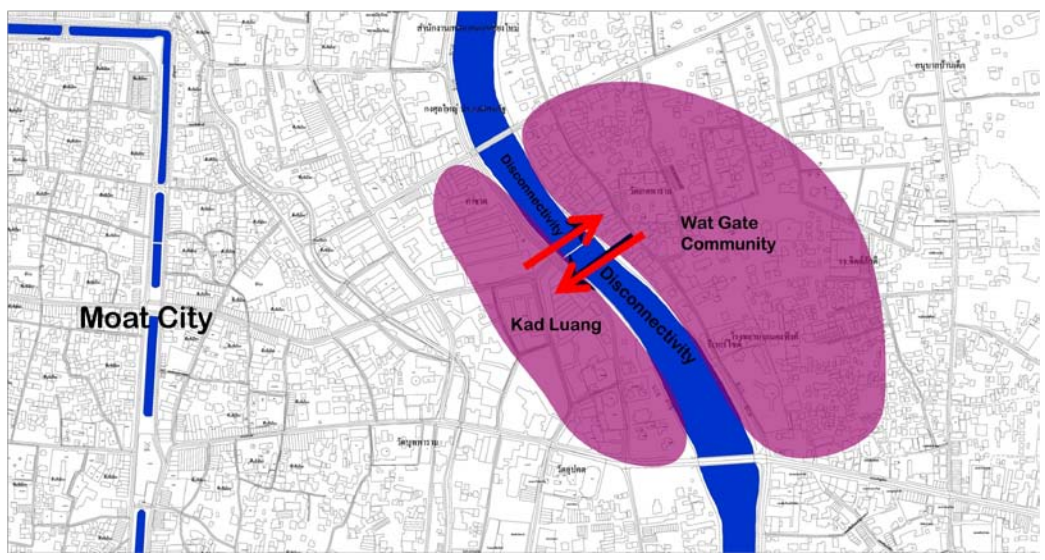


Figure 36 - Diagram of the disconnected places

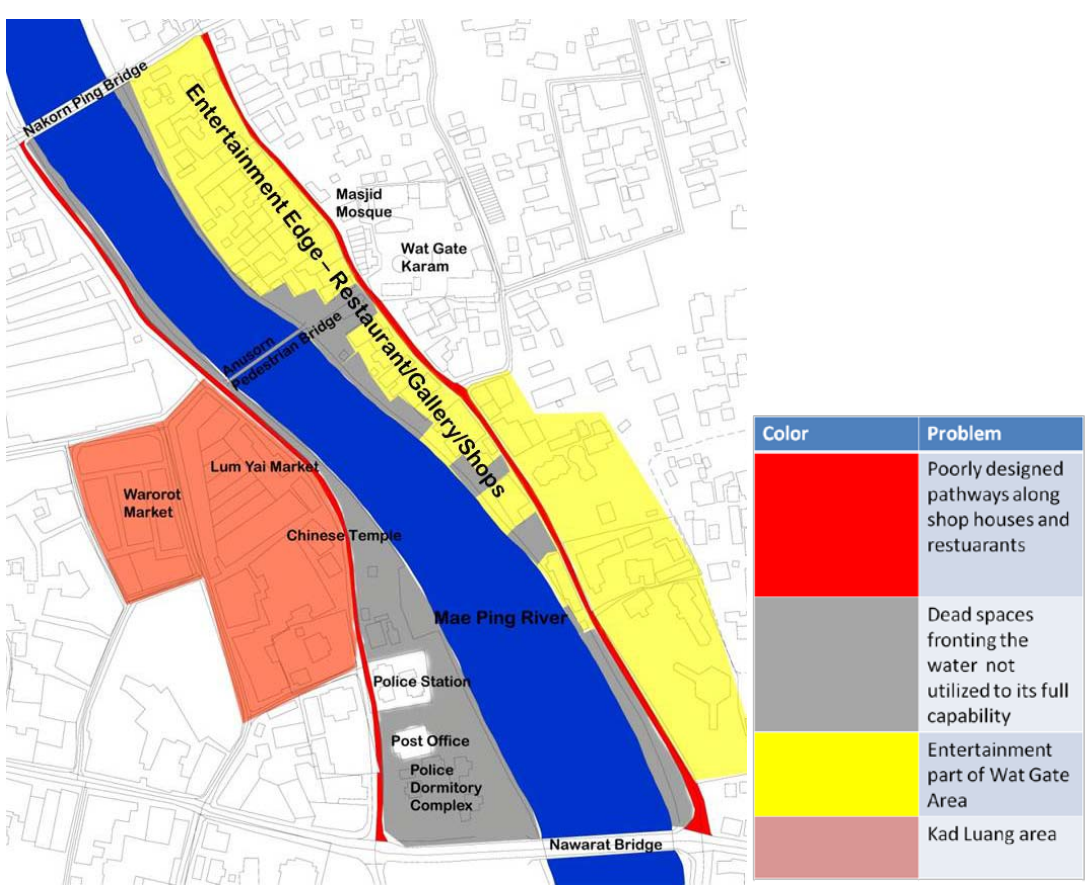


Figure 37 - Diagram of the Wat Gate area's present conditions



## Parameters for Design Aspect

### Interviews with Wat Gate Community:

During some time in Chiang Mai in November 2011 I had the opportunity to travel around Chiang Mai. Paying close attention to Mae Ping River's watery edges it became strongly visible that the historical place for commerce, trade and foreign and local interventions is heavily concentrated in an area called the Wat Gate (Foreigner District) community. Wat Gate community originally was along both edges of the river, approximately between Nawarat Bridge and Nakornping Bridge, and including Warorot Market (which was called Kad Luang, Royal/City Market) across the residential area. This site has the most potential for improvement and water's edge intervention.

Through informal interviews with the residents of Wat Gate Community; here are the main issues that they have with their community:

1. Pride in strong community bonds and preservation of old structures and way of life.
2. Warorot Market across the river played a major role in daily activities but because pedestrian bridge has not been kept well, it has become difficult to go to market. Market goers have a long distance to bypass before they reach the marketplace on the otherside of the riverbank. Convenient access across the river and having more activities on the Wat Gate side is needed.
3. Footpaths & bicycle paths are disconnected, dangerous and unpleasant.
4. Lack of nature and greenery as wetlands were all removed from the river's edge.

Site of interest:

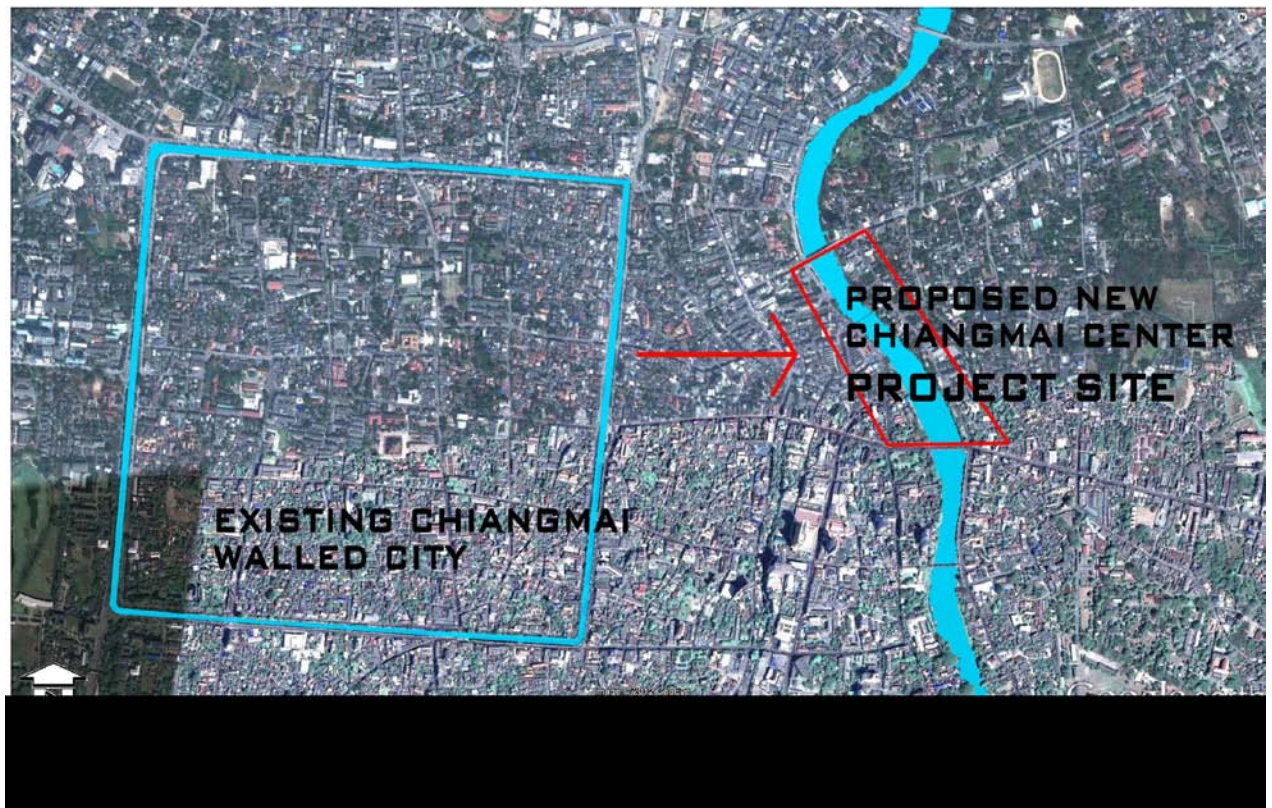


Figure 38 - Diagram of site location for the new master plan

## Existing Conditions:

### Planning Analysis for Chiang Mai City & Around the Mae Ping River

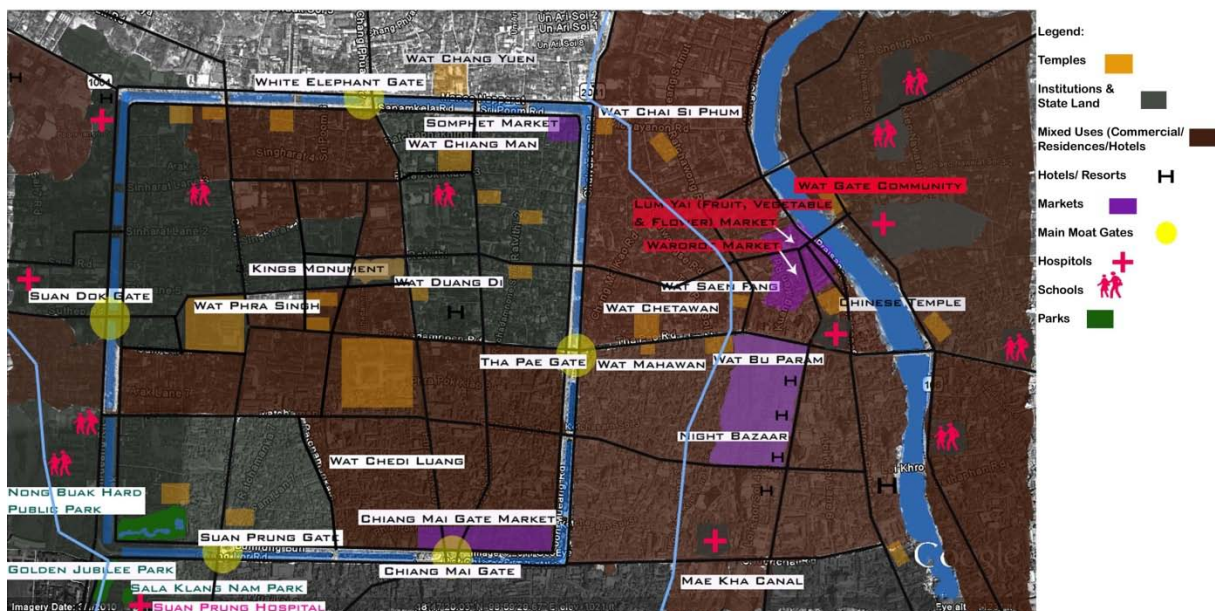


Figure 39 - Diagram of Land use in Chiang Mai

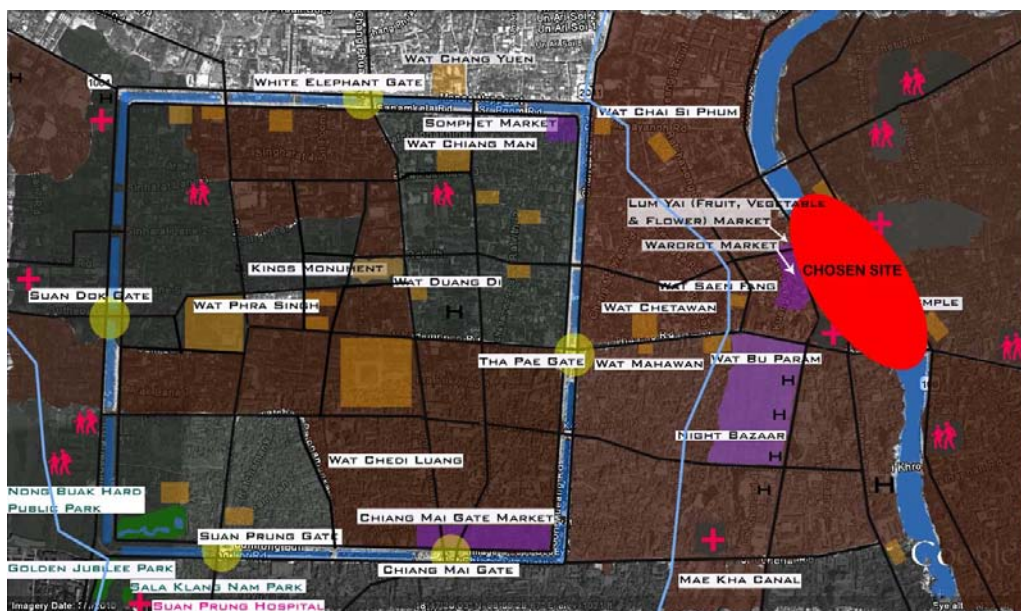


Figure 40 - Diagram of the chosen site in context to the rest of the city

## Flood Zones:

On the next page is a map of Chiang Mai's flood zones during the raining season flash floods come from the Doi Suthep, Doi Saket mountains and most of the districts around the Mae Ping River which causes the river to overflow and fill up the lower flood areas. The site of interest is in the shaded brown area where the water height is 4.60 meters.



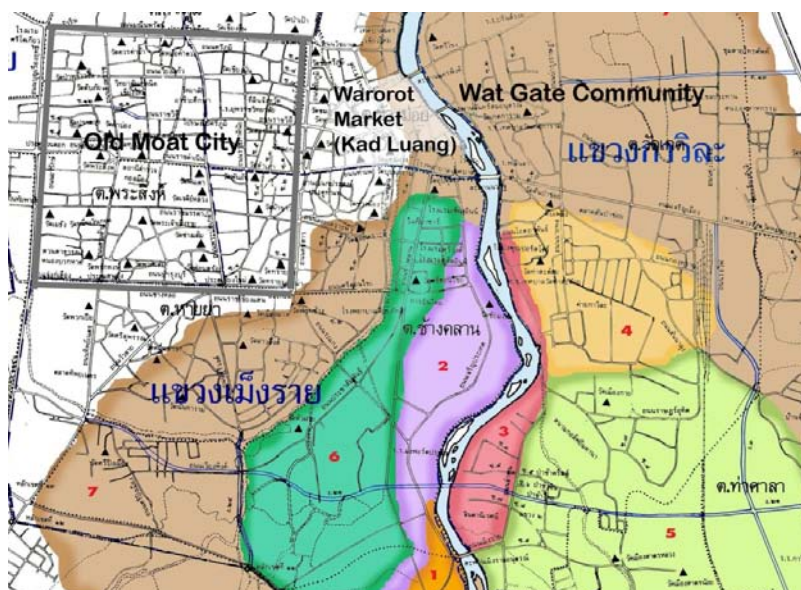


Figure 41 - Flood Plains of Chiang Mai (Planning Department of Chiang Mai, 2011)

**Flood Level Table:**

Zones	Flood Level (Meters)
1	3.70
2	3.90
3	4.00
4	4.10
5	4.20
6	4.30
7	4.60

Figure 42 - Table of Chiang Mai's flood zones and flood levels

# 7

## **New Design on the Mae Ping River Edge**

## Design Objectives for 2050 Master Plan – Defining the bigger issues

- From the assumption of the future analysis for Chiang Mai; Wat Gate (Foreigner District) will be a healthcare and leisure hub thus promoting a better way of life in that area is focused on.
- Focusing on the water's edge with pathways and pedestrian bridge (connecting the disconnected cultural district), encouraging walking and bicycle modes of transportation, framing the Mae Ping River with park plazas and canals, improving the quality of pedestrian activities along the water.
- Encouraging riverine activities on the water's edge such as floating restaurants and markets and allow floods to flood into canals, wetlands and the roads a few days a year.



Figure 43 - Diagram of spaces around the Mae Ping River

Legend:



Existing river shape



Intermediate space where the river is allowed to flood with existing structures that are more flexible to the dynamics of the river

Programme for The New Chiang Mai Center Chiva Warin (River Life Center) by the Mae Ping River Master Plan:

**Link Wat Gate Community and Kad Luang (Warorot Market)** - The pedestrian/bicycle/fishing bridge linking the two places shall be revived. Incorporating floating markets and gardens along the river to further frame the river's character and remind people of its past uses.

**Improve pedestrian walkways for users** - Presently the commercial and entertainment spaces are encroached by market stalls and vehicles, to remedy this, boardwalks elevated higher than flood levels would create a new way of moving throughout the spaces during the dry and wet seasons. These walkways connecting the river's edge are places for promenade, resting with Tai Chi spaces and bioswales planted in the center to purify water(as seen in the drawings below).



Figure 44 - Diagram of Tai Chi & relaxation plaza



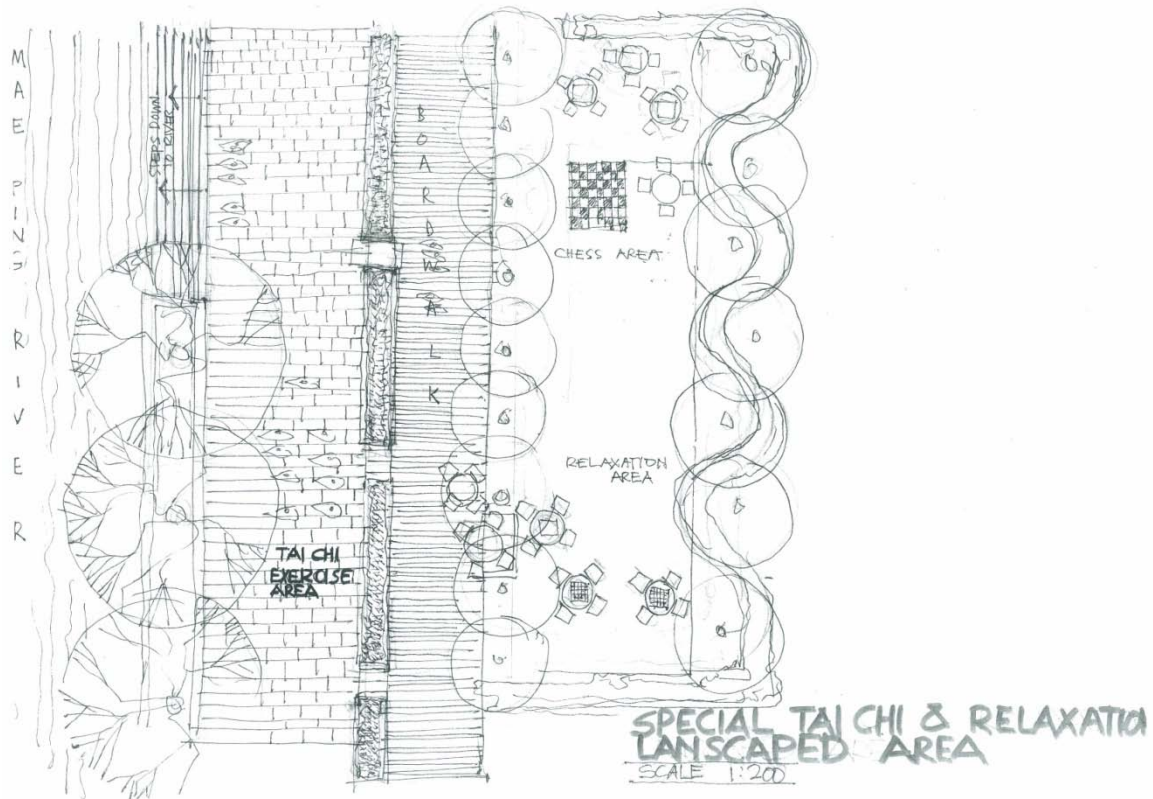


Figure 45 - Plan of Tai Chi & relaxation plaza

**New spaces for gathering** - Spaces appropriate for socializing, shopping, eating and viewing the festivities such as an Entertainment Center with a cooling reflective pool to celebrate Lanna culture. A New Museum for Chiang Mai for its old and new heritage is a must to remind visitors of its past and present with modern art galleries showcasing Lanna arts and contemporary Lanna arts as well.

**Create Recreational Spaces along the river's edge** - Allocate dead or not fully utilized spaces into riverside parks e.g. for walking, eating, boating.

**Highlight the Dynamic Characteristic of the river with seasonally used spaces** - Encouraging social interaction with the river shall be a step in improving the relationship with water.

Recognizing the intermediate spaces which is seasonally inundated by water, by allowing the

structures to change with the watery environment, e.g. floating structures that changes level as water levels change. A Meditation Spa would go in sync with the Chiang Mai's future as a healthcare hub and a Chiang Mai University Campus on the floodplains specifically used for the study of Lanna Culture and Sustainable Environmental Studies.

# 8

## **The Chiva Warin Center (River Life Center) by the Mae Ping River**

- **Master Plan**
- **Architectural Design of Key Buildings**
- **Pedestrian Bridges and Riverside Boardwalk**

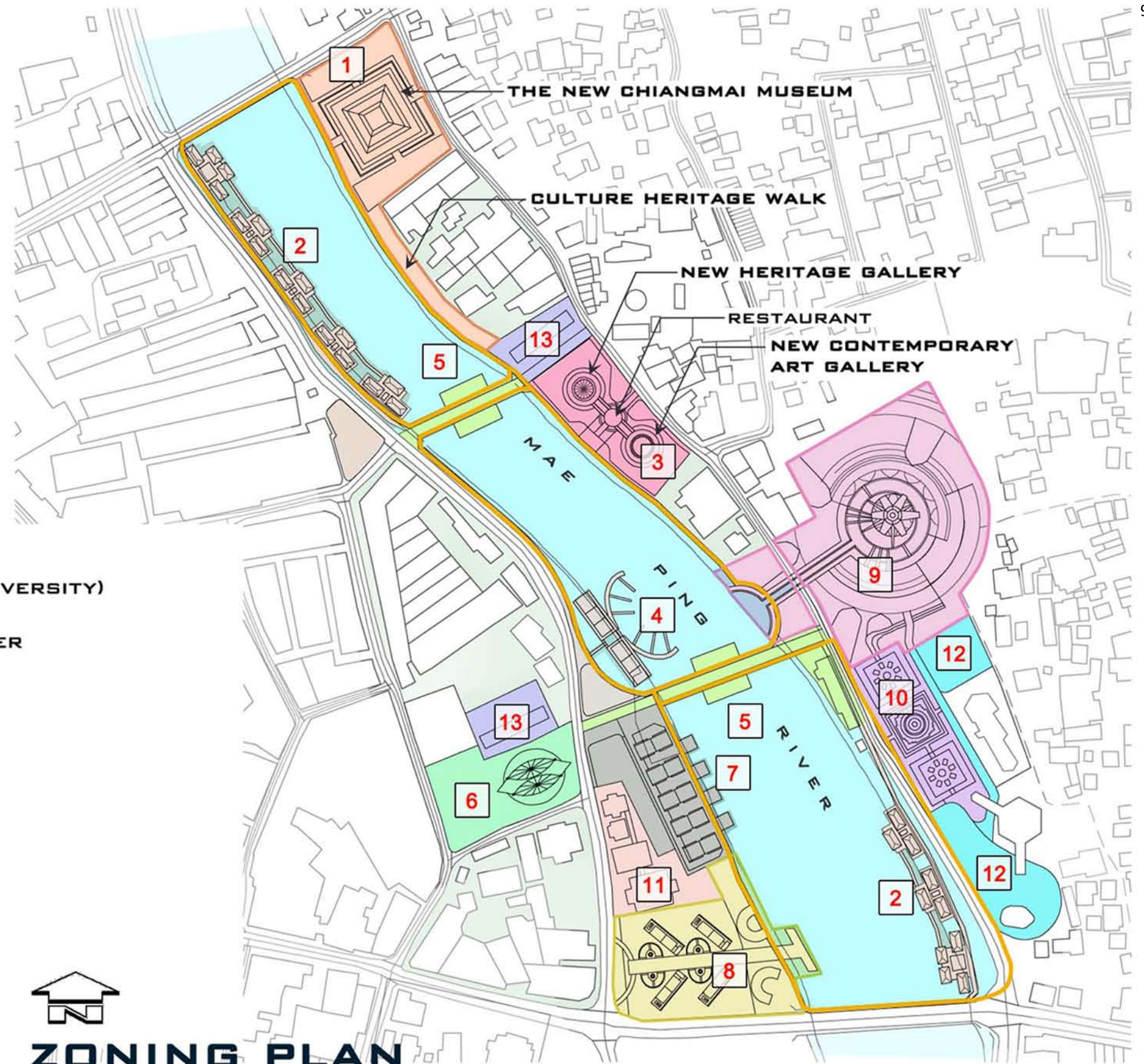


# CHIVA WARIN CENTER BY THE MAE PING RIVER CHIANGMAI

94

## LEGEND

- 1** THE NEW CHIANGMAI MUSEUM
- 2** FLOATING MARKET
- 3** HERITAGE ART GALLERY & MODERN ART GALLERY
- 4** BOAT STATION
- 5** PEDESTRIAN BRIDGE WITH FISHING DECKS & COFFEE HOUSE
- 6** THE NEW SHOPPING CENTER
- 7** FISHERMAN'S WHARF (RIVERSIDE RESTAURANT)
- 8** INSTITUTION (THE NEW CHIANGMAI UNIVERSITY)
- 9** THE CHIANGMAI ENTERTAINMENT CENTER
- 10** SPA & MEDITATION CENTER
- 11** NEW POST OFFICE/ POLICE STATION & FIRE STATION
- 12** WETLAND
- 13** BICYCLE PARKING
-  LANDSCAPE GARDEN
-  BOARD WALK & BICYCLE LANE



**ZONING PLAN**

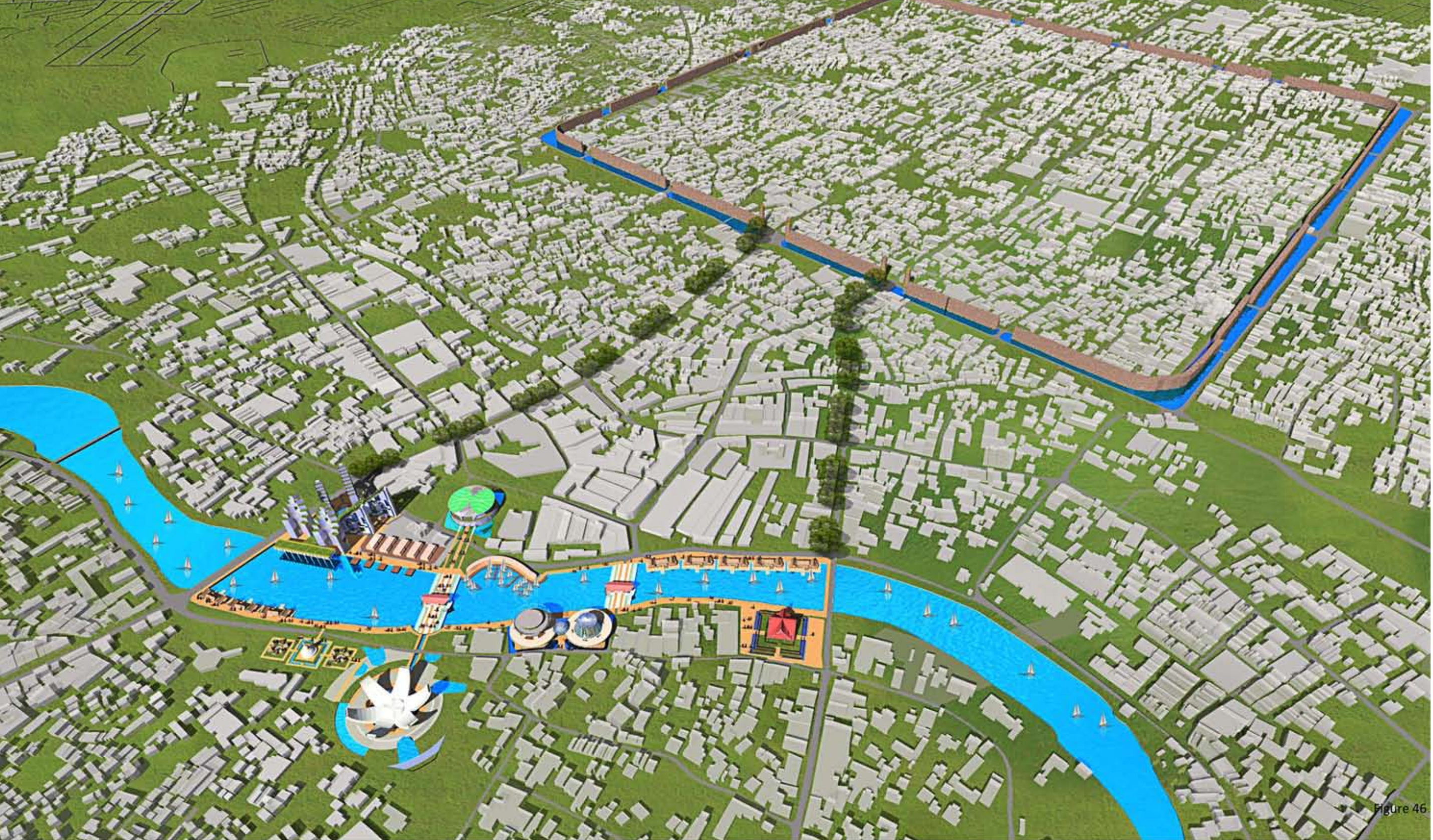
SCALE 1:1500

Figure 46 a



# CHIVA WARIN CENTER BY THE MAE PING RIVER CHIANGMAI

AERIAL PERSPECTIVE SHOWING THE OVERALL PROJECT SITE IN  
RELATION TO THE OLD CHIANGMAI WALLED CITY





**CHIVA WARIN CENTER BY THE MAE PING RIVER CHIANGMAI**  
**AERIAL PERSPECTIVE SHOWING THE OVERALL PROJECT SITE IN**  
**RELATION TO THE OLD CHIANGMAI WALLED CITY**

96



Figure 47



# DESIGN CONCEPTS

97

## THE CHIANG MAI MUSEUM

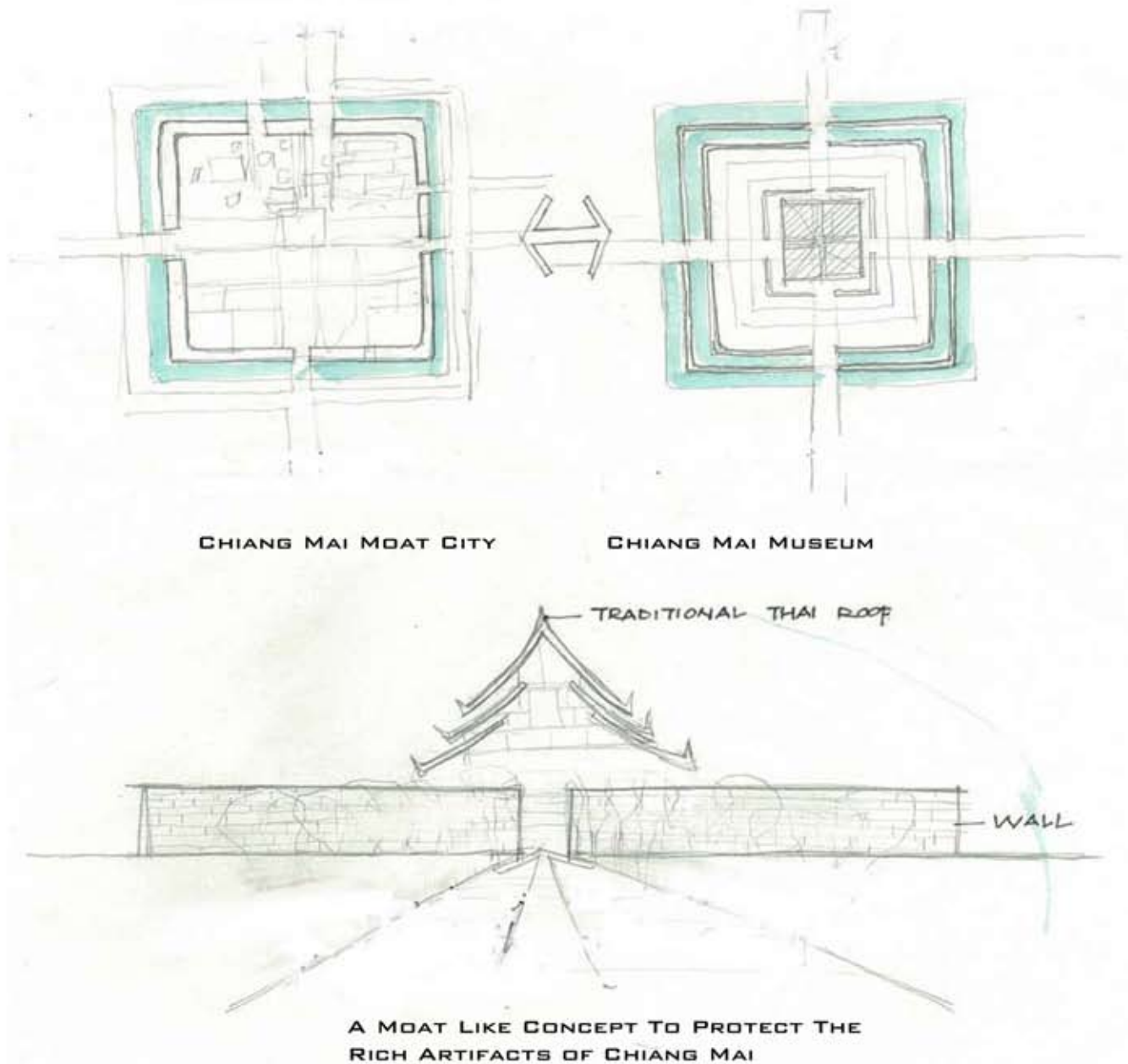
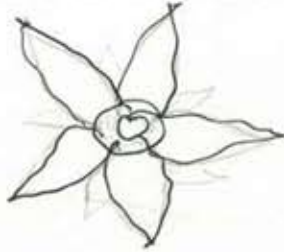


Figure 48

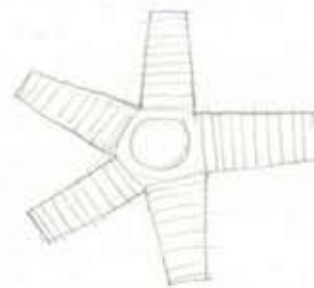
## DESIGN CONCEPTS

98

### CULTURAL ENTERTAINMENT CENTER



LOTUS FLOWER



CULTURAL THEATRES



THAILAND'S LOCAL LOTUS PROVIDES THE INSPIRATION FOR THE DESIGN OF THE CULTURAL ENTERTAINMENT CENTER. A FLOWER DEPICTED IN MANY OF THE TEMPLE MURALS AS A HARDY PLANT THAT PURIFIES MUDDY WATER - MUCH LIKE THE REVIVAL OF THE MAE PING RIVER

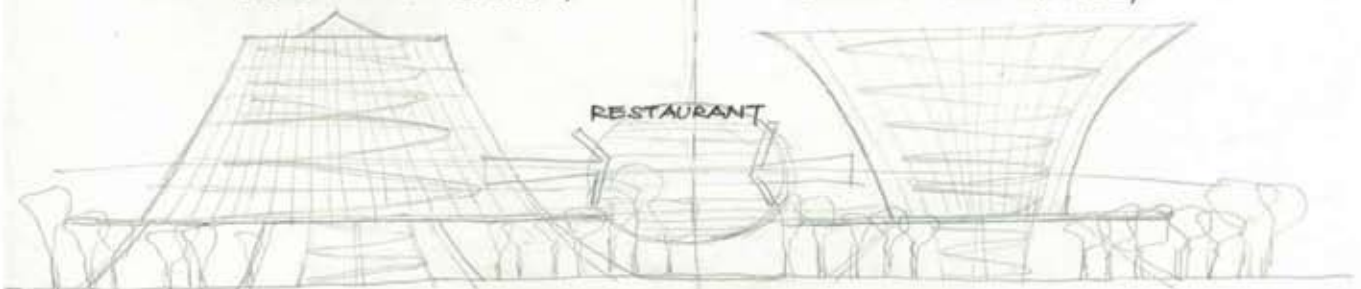
### HERITAGE AND MODERN ART GALLERY

TRADITIONAL THAI FARMER'S HAT



MODERN ART GALLERY

HERITAGE ART GALLERY



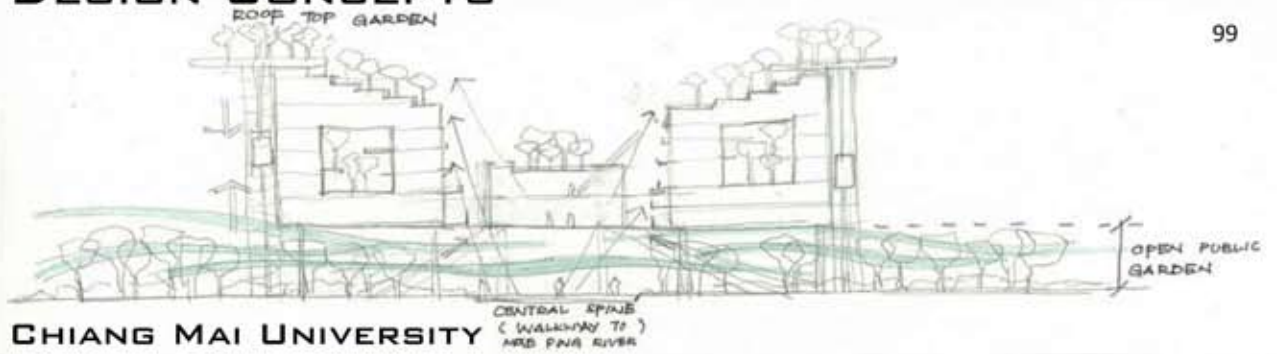
RESTAURANT

Figure 49



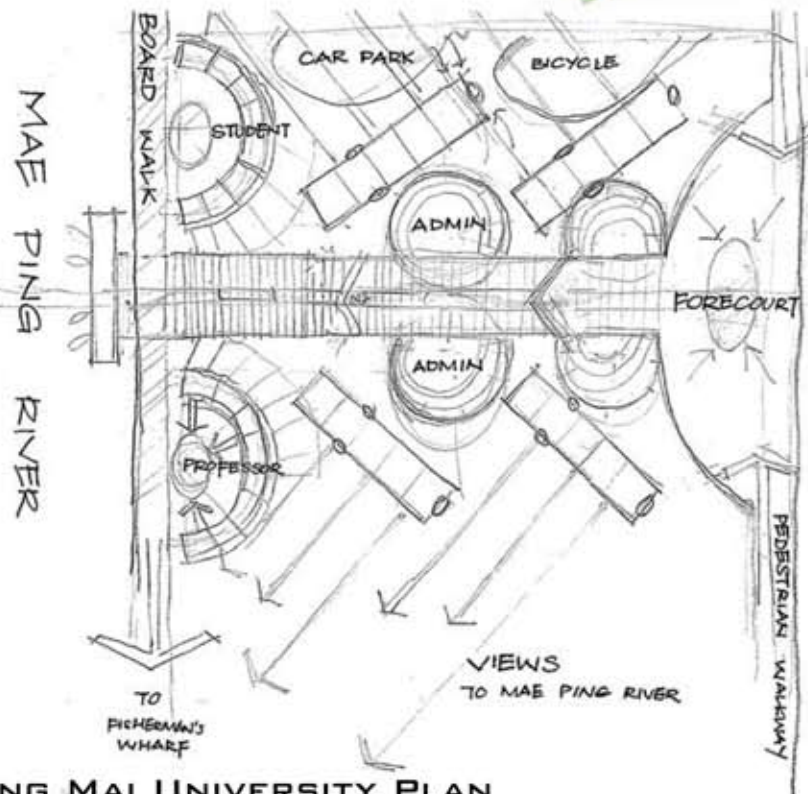
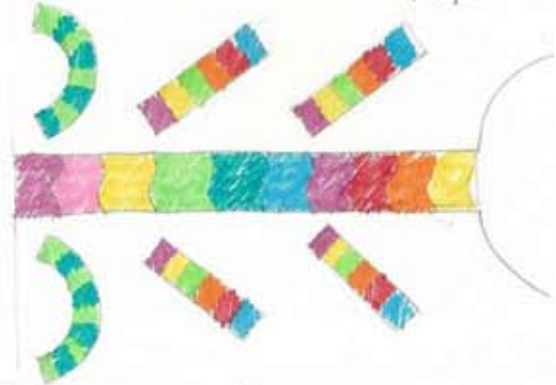
## DESIGN CONCEPTS

99



THE UNIVERSITY IS THE PLACE TO ATTRACT NEW GENERATION TO THE MAE PING RIVERBANKS. SIMILAR TO THAMMASAT UNIVERSITY BY THE CHAO-PHRAYA RIVER. THIS WILL BRING THE WATERWAY BACK TO LIFE, ESPECIALLY WITH THE FLOATING MARKETS & RESTUARANTS NEARBY TO SUPPORT THE GROWTH OF THIS AREA.

NEW CHIANG MAI UNIVERSITY ROOF TOP



CHIANG MAI UNIVERSITY PLAN

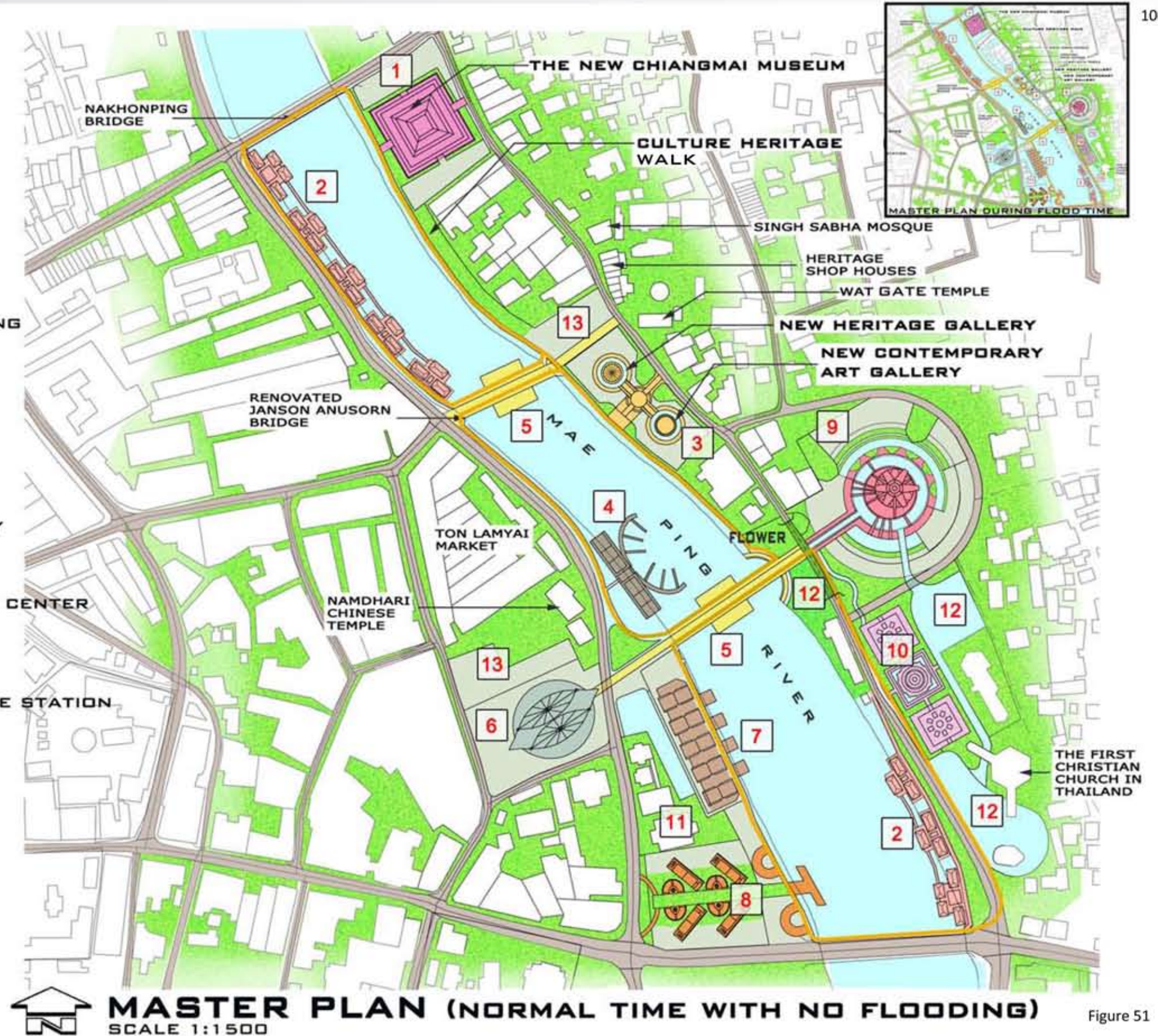
Figure 50



# CHIVA WARIN CENTER BY THE MAE PING RIVER CHIANGMAI

## LEGEND

- 1** THE NEW CHIANGMAI MUSEUM
- 2** FLOATING MARKET
- 3** HERITAGE ART GALLERY & MODERN ART GALLERY
- 4** BOAT STATION
- 5** PEDESTRIAN BRIDGE WITH FISHING DECKS & COFFEE HOUSE
- 6** THE NEW SHOPPING CENTER
- 7** FISHERMAN'S WHARF (RIVERSIDE RESTAURANT)
- 8** THE NEW CHIANGMAI UNIVERSITY
- 9** THE NEW CHIANGMAI CULTURAL ENTERTAINMENT & CONVENTION CENTER
- 10** SPA & MEDITATION CENTER
- 11** RENOVATED POST OFFICE/ POLICE STATION & NEW FIRE STATION
- 12** WETLAND
- 13** BICYCLE PARKING & RENTAL
- LANDSCAPE GARDEN
- BOARD WALK & BICYCLE LANE

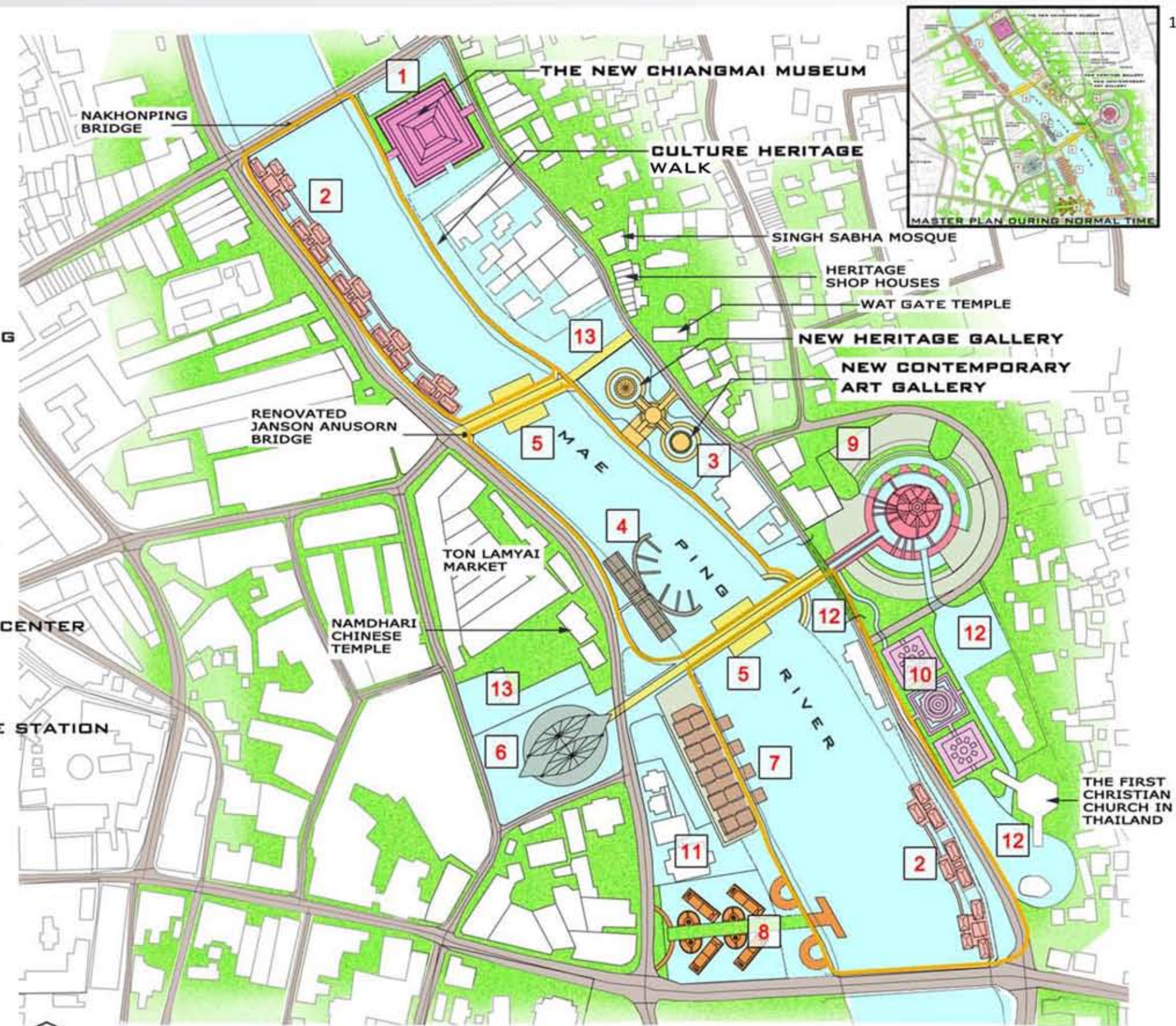




# CHIVA WARIN CENTER BY THE MAE PING RIVER CHIANGMAI

## LEGEND

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- LANDSCAPE GARDEN
- BOARD WALK & BICYCLE LANE



**MASTER PLAN** (SHOWING PROJECT SITE DURING FLOOD TIME) Figure 52  
SCALE 1:1500



## LEGEND

- 1 THE NEW CHIANGMAI MUSEUM
  - 2 FLOATING MARKET
  - 3 HERITAGE ART GALLERY & MODERN ART GALLERY
  - 4 BOAT STATION
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  - 10 SPA & MEDITATION CENTER
  - 11 RENOVATED POST OFFICE/ POLICE STATION & NEW FIRE STATION
  - 12 WETLAND
  - 13 BICYCLE PARKING & RENTAL
- LANDSCAPE GARDEN
  - BOARD WALK & BICYCLE LANE
  - WATER CANAL LINKAGES TO MAE PING RIVER
  - CULTURAL BELT
  - INSTITUTIONAL AREA
  - COMMERCIAL BELT



**MASTER PLAN ZONING MAP**  
SCALE 1:1500

Figure 53

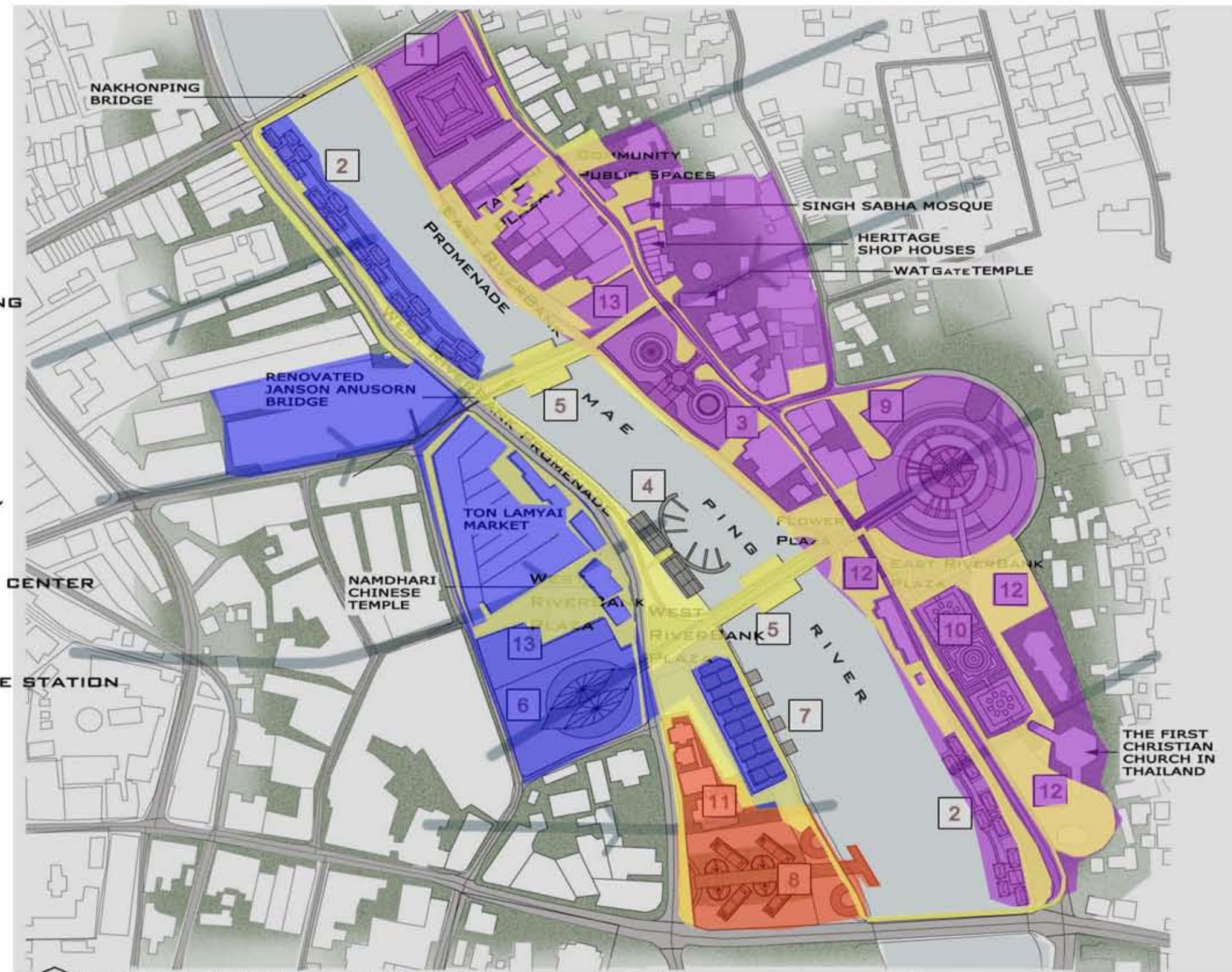


# CHIVA WARIN CENTER BY THE MAE PING RIVER CHIANGMAI

103

## LEGEND

- 1 THE NEW CHIANGMAI MUSEUM
- 2 FLOATING MARKET
- 3 HERITAGE ART GALLERY & MODERN ART GALLERY
- 4 BOAT STATION
- 5 PEDESTRIAN BRIDGE WITH FISHING DECKS & COFFEE HOUSE
- 6 THE NEW SHOPPING CENTER
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- LANDSCAPE GARDEN
- BOARD WALK & BICYCLE LANE
- WATER CANAL LINKAGES TO MAE PING RIVER
- CULTURAL BELT
- INSTITUTIONAL AREA
- COMMERCIAL BELT
- PUBLIC SPACES/ PATHWAYS



**MASTER PLAN ZONING & PEDESTRIAN CIRCULATION MAP**  
SCALE 1:1500

Figure 54

SUNLIN GOH  
DOCTORATE PROJECT 2012  
UNIVERSITY OF HAWAII

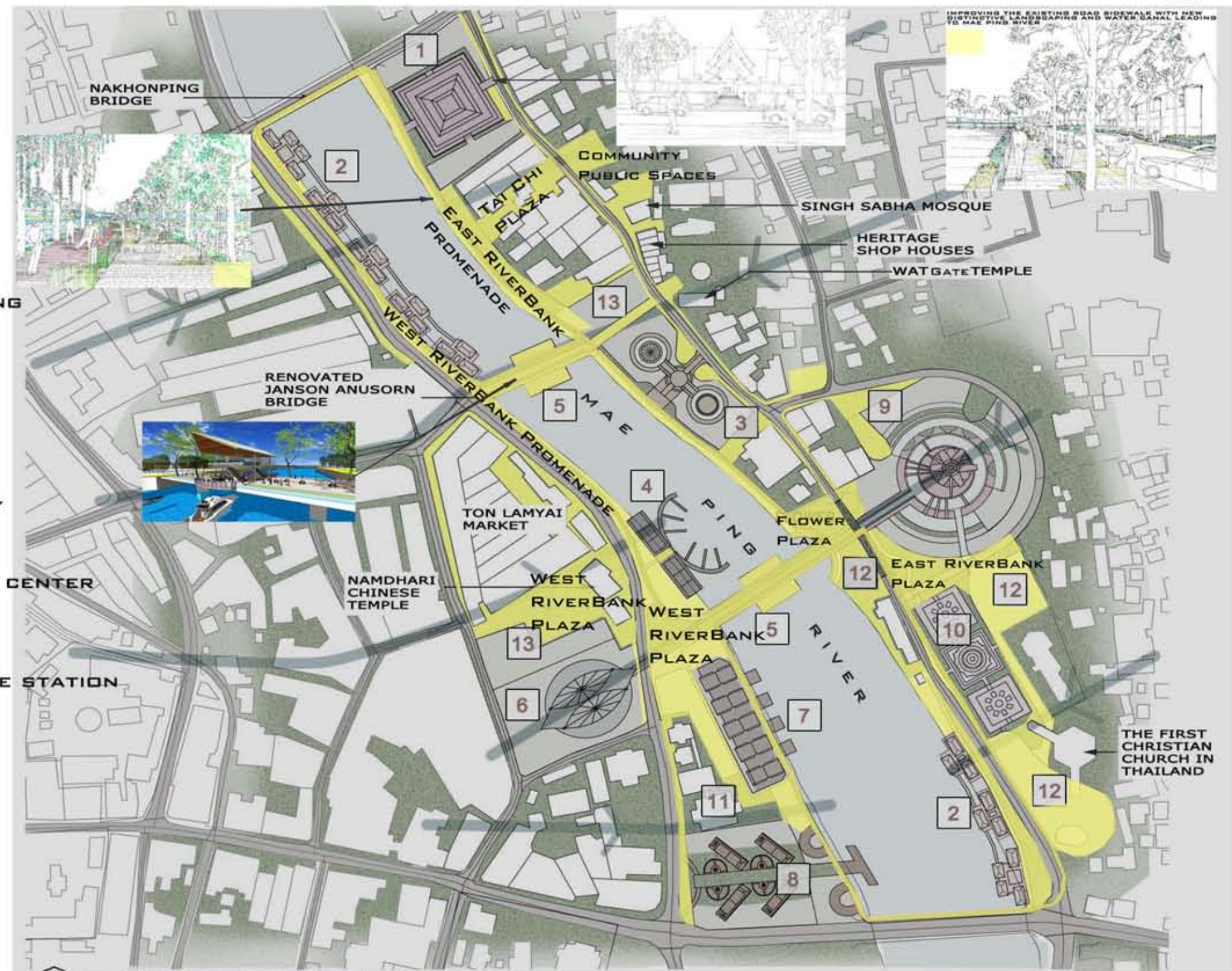


# CHIVA WARIN CENTER BY THE MAE PING RIVER CHIANGMAI

104

## LEGEND

- 1 THE NEW CHIANGMAI MUSEUM
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- LANDSCAPE GARDEN
- BOARD WALK & BICYCLE LANE
- WATER CANAL LINKAGES TO MAE PING RIVER
- PUBLIC SPACES/ PATHWAYS



**MASTER PLAN CONNECTIVE SPACES**  
SCALE 1:1500



# CHIVA WARIN CENTER BY THE MAE PING RIVER CHIANGMAI

105

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- 13** BICYCLE PARKING & RENTAL
-  LANDSCAPE GARDEN
-  BOARD WALK & BICYCLE LANE
-  WATER CANAL LINKAGES TO MAE PING RIVER

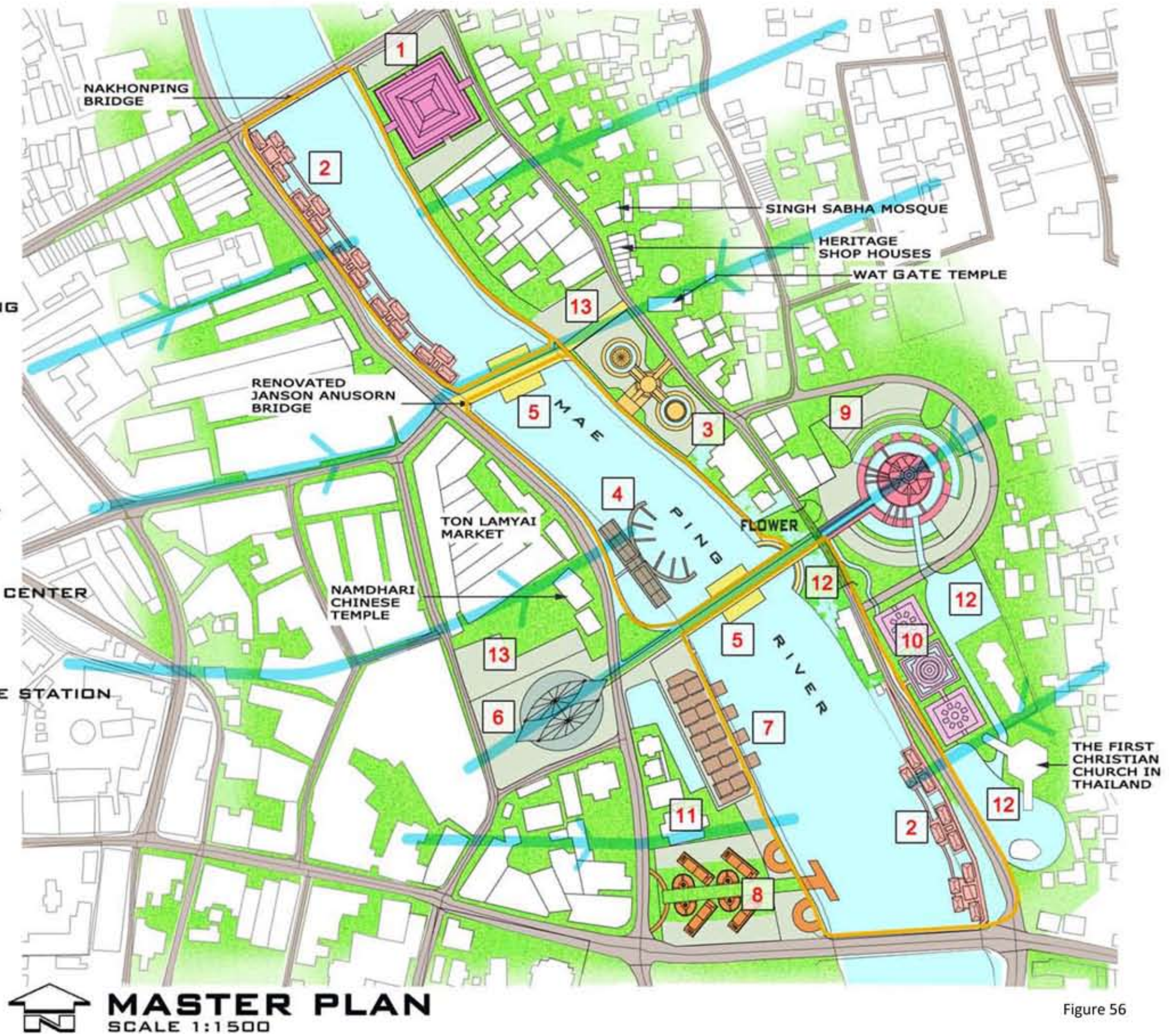


Figure 56



# IMPROVING THE EXISTING ROAD SIDEWALK WITH NEW DISTINCTIVE LANDSCAPING AND WATER CANAL LEADING TO MAE PING RIVER

106

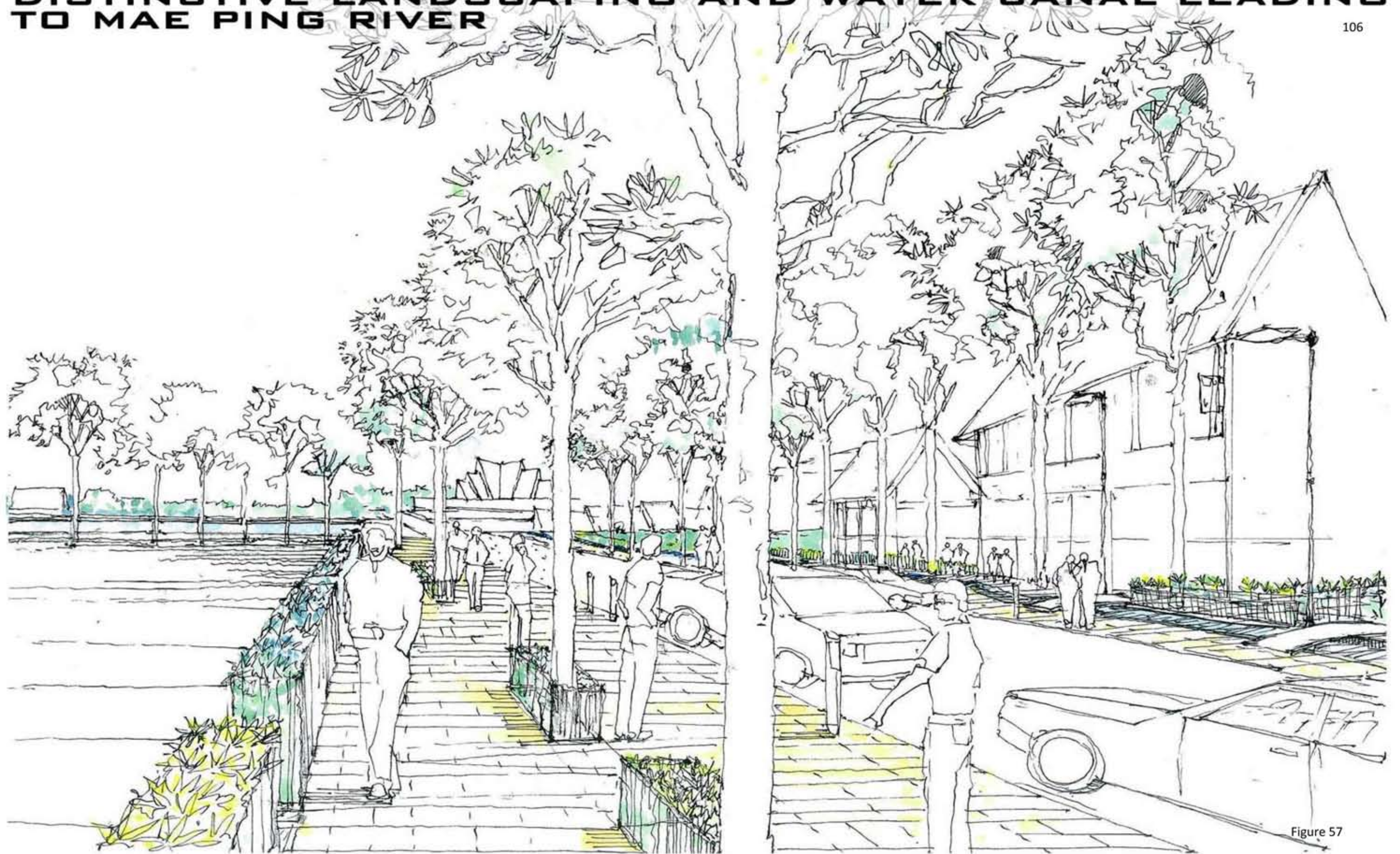


Figure 57



**PEDESTRIAN WALKWAY AND BOARDWALK LEVEL IS HIGHER THAN  
THE ROAD LEVEL WHEN ROAD IS FLOODED**

107

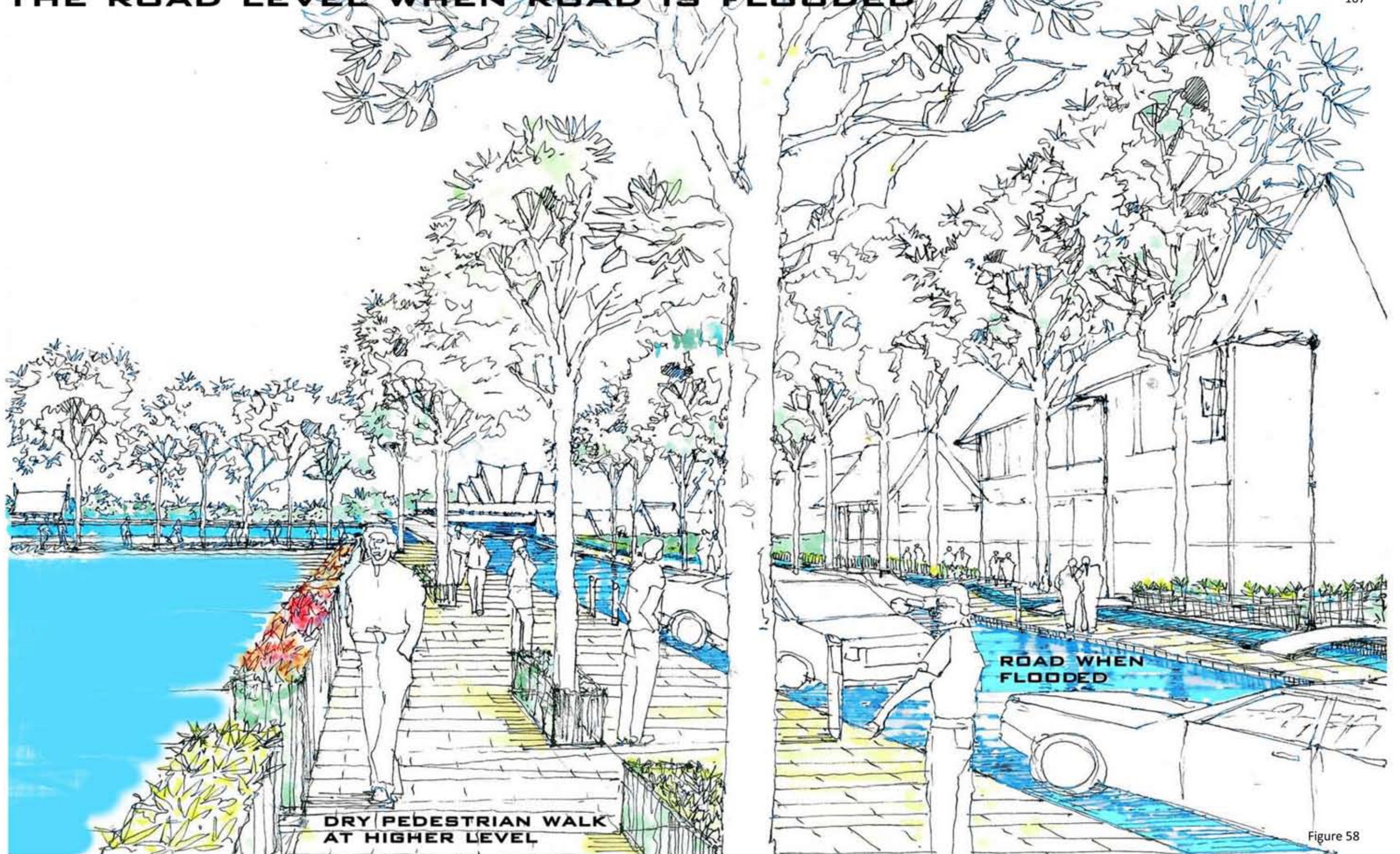


Figure 58



# EXISTING ROAD LANDSCAPING IMPROVEMENT

108



Figure 59



# EXISTING ROAD LANDSCAPING IMPROVEMENT

109



Figure 60



1

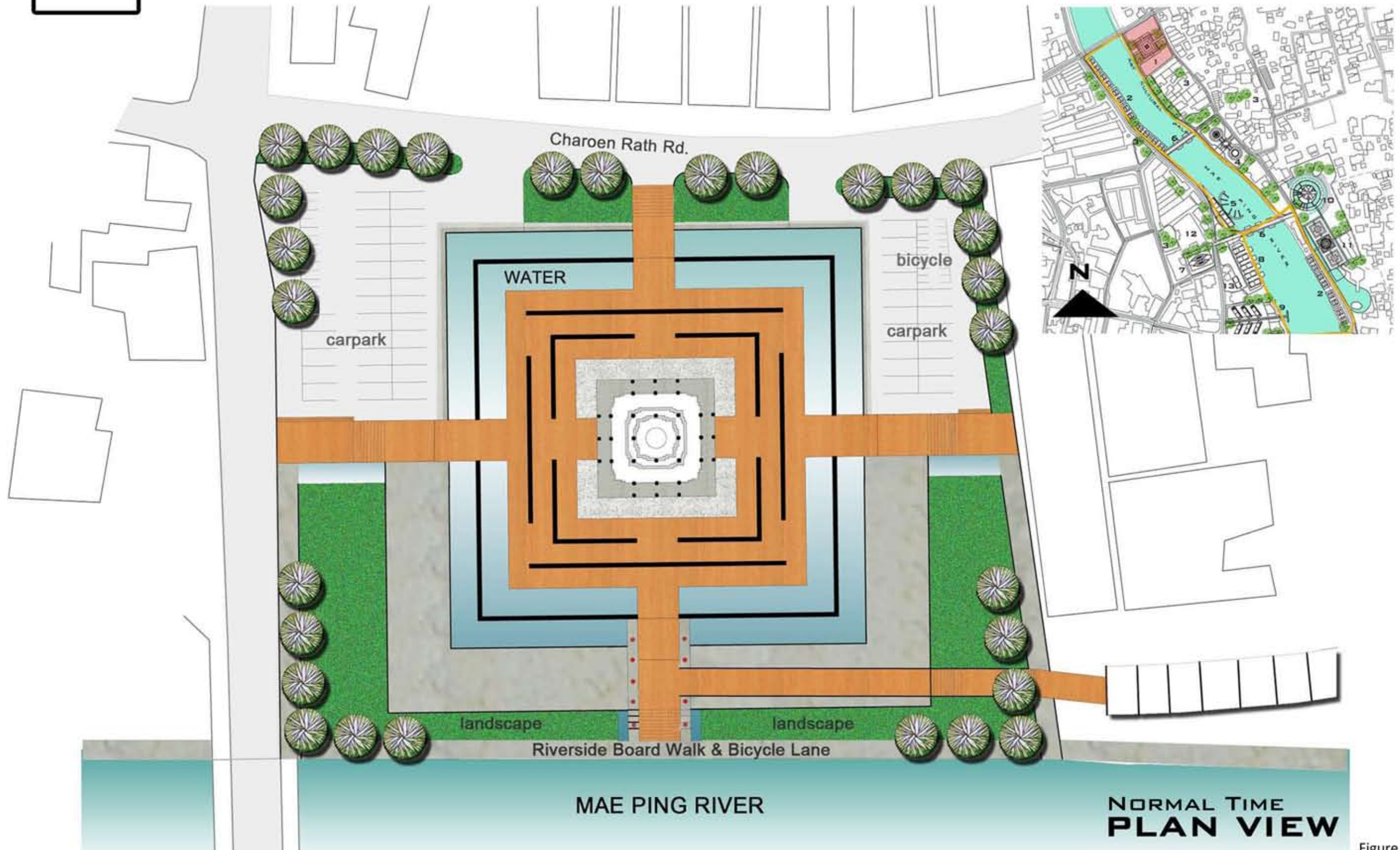
**ARCHITECTURAL DESIGN****THE CHIANGMAI MUSEUM****LOCATION PLAN****NORMAL TIME  
PLAN VIEW**

Figure 61



1

# ARCHITECTURAL DESIGN

## THE CHIANGMAI MUSEUM

### LOCATION PLAN

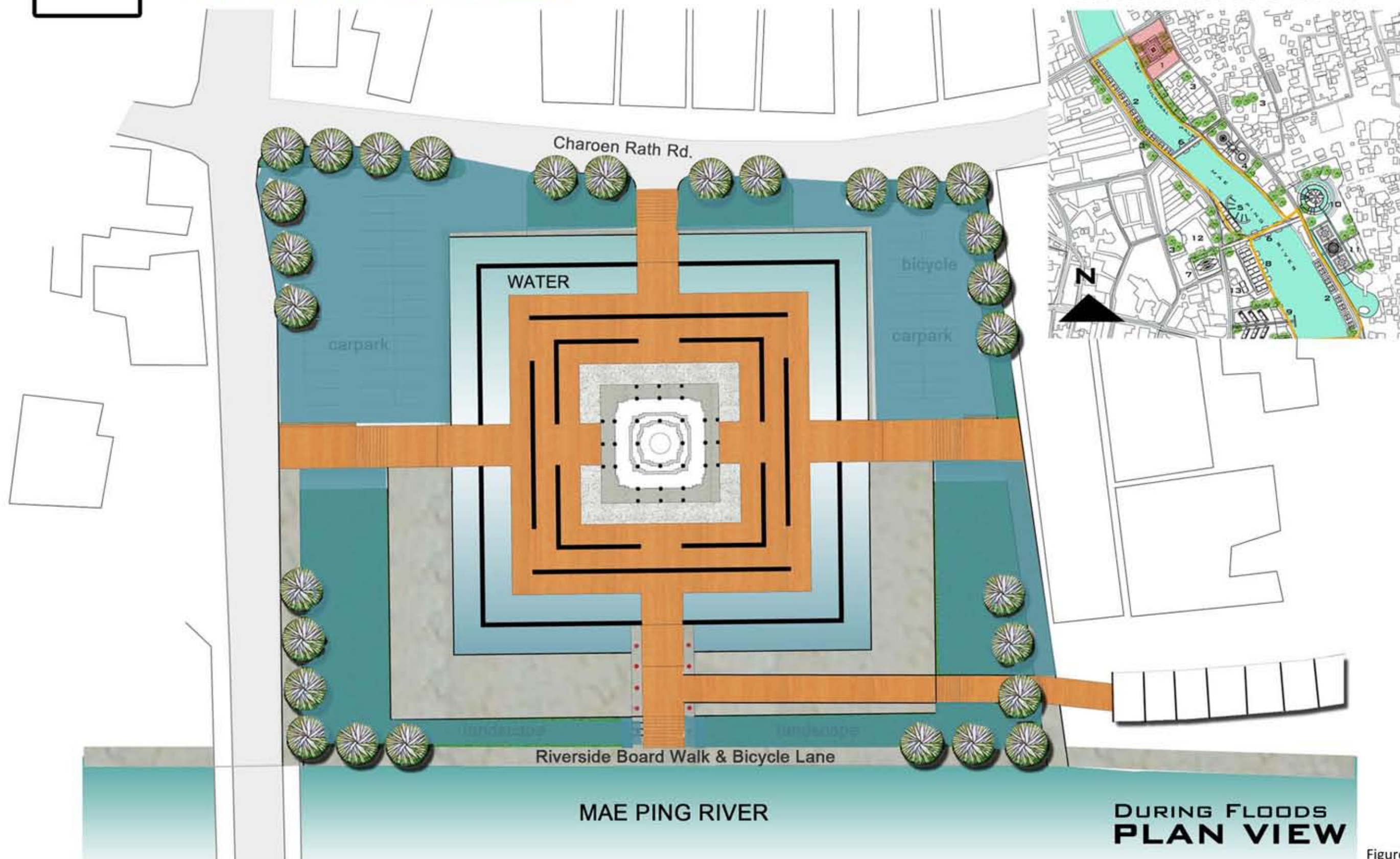


Figure 62



1

ARCHITECTURAL DESIGN  
THE CHIANGMAI MUSEUM

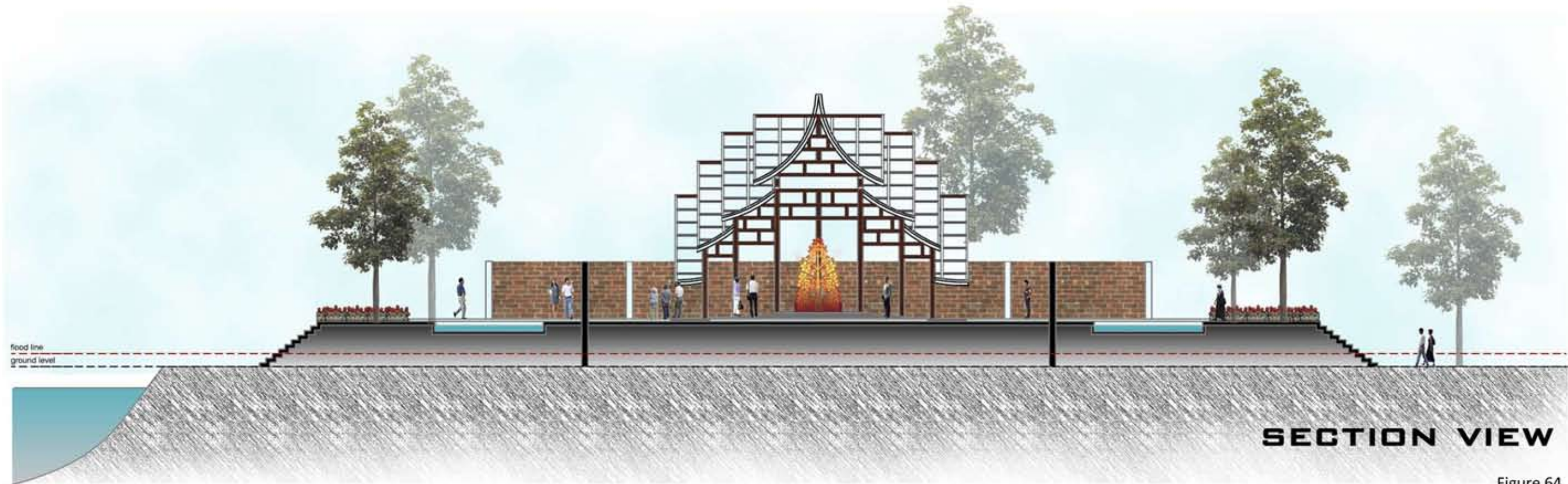


Figure 63



1

ARCHITECTURAL DESIGN  
THE CHIANGMAI MUSEUM



SECTION VIEW

Figure 64



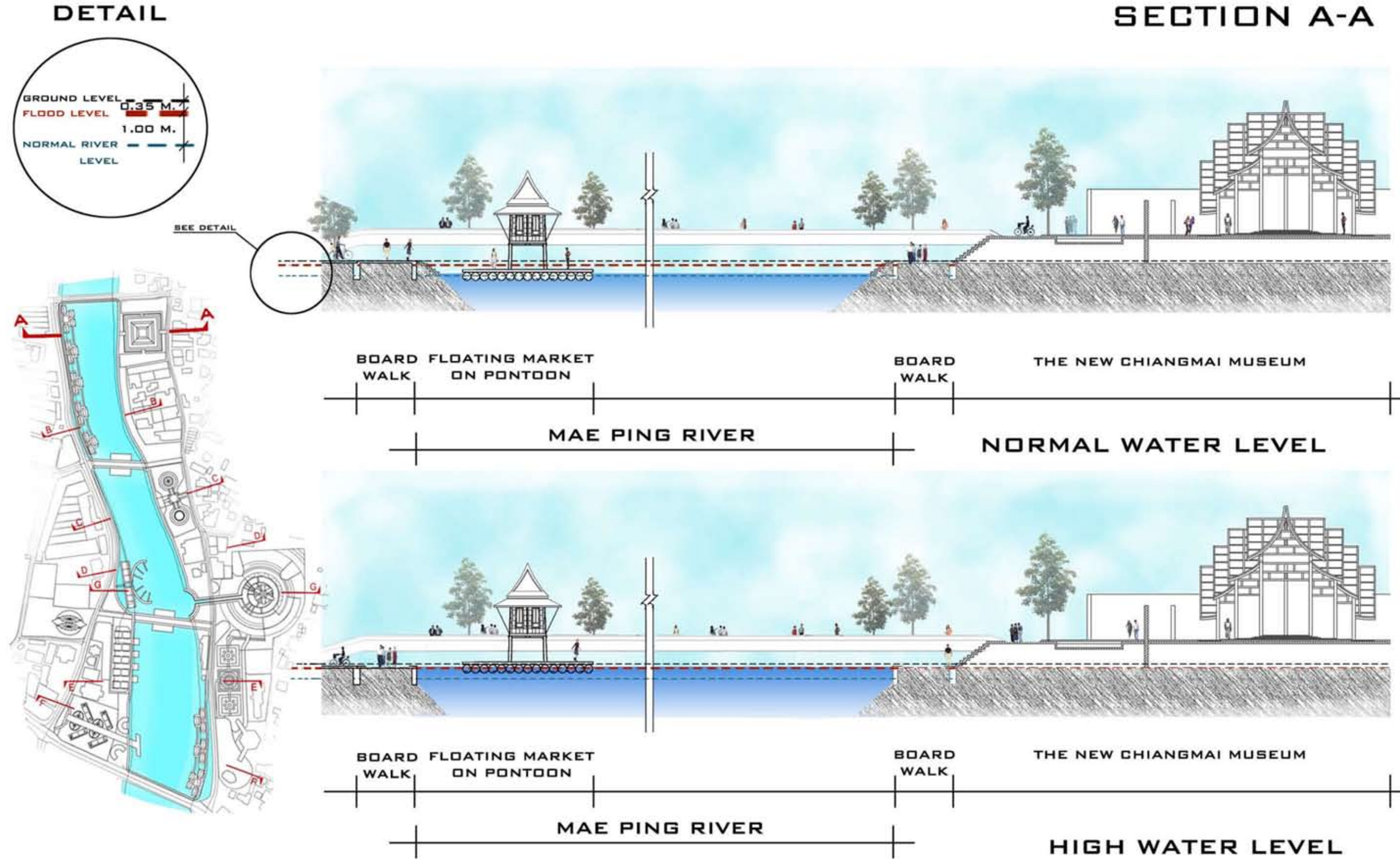


Figure 65



# ARCHITECTURAL DESIGN

## ART AND CULTURAL WALK WAY

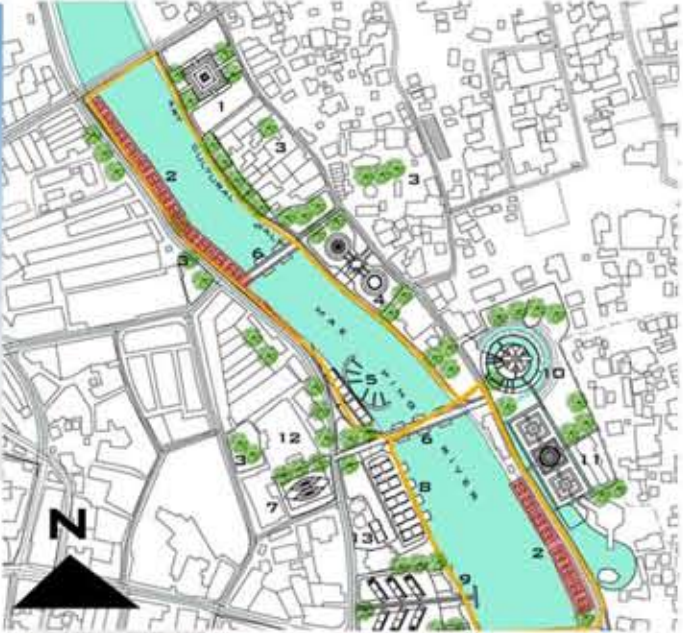


Figure 66





**ARCHITECTURAL DESIGN**  
**FLOATING MARKET**



**LOCATION PLAN**



**ELEVATION VIEW**

Figure 67



3

**ARCHITECTURAL DESIGN**

HERITAGE GALLERY &amp; MODERN ART GALLERY

HERITAGE  
ART GALLERYMODERN  
ART GALLERY

RESTAURANT

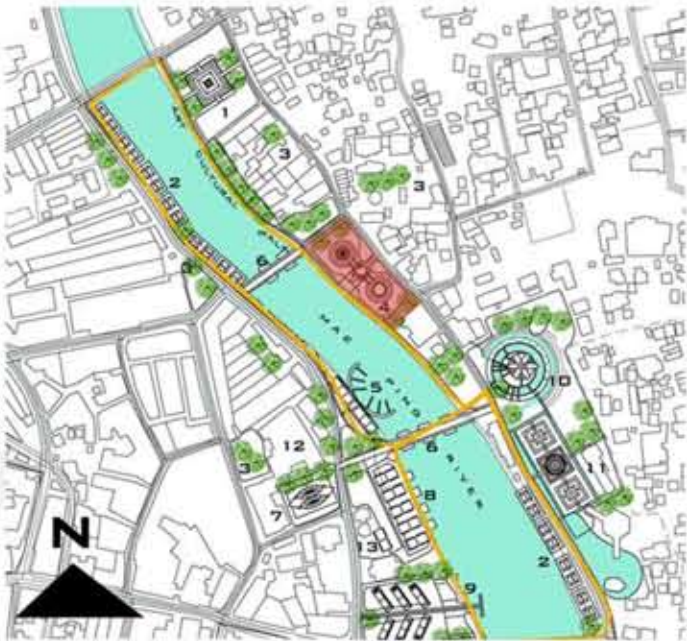
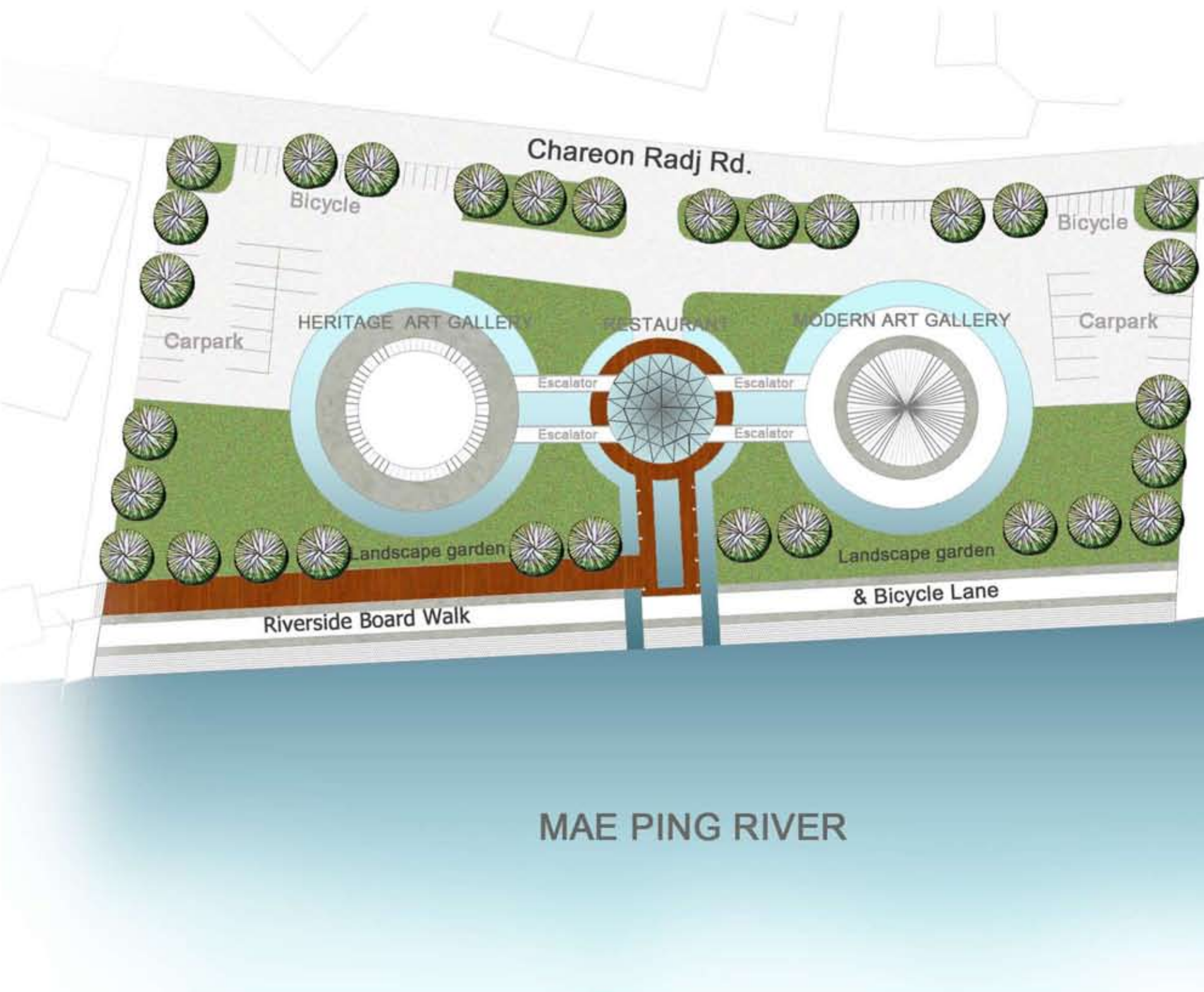


Figure 68



3

ARCHITECTURAL DESIGN  
HERITAGE GALLERY & MODERN ART GALLERY



LOCATION PLAN

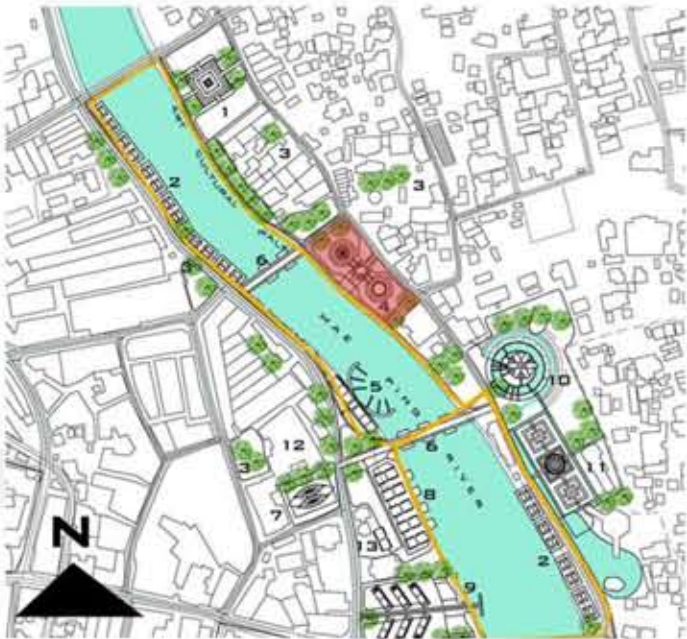
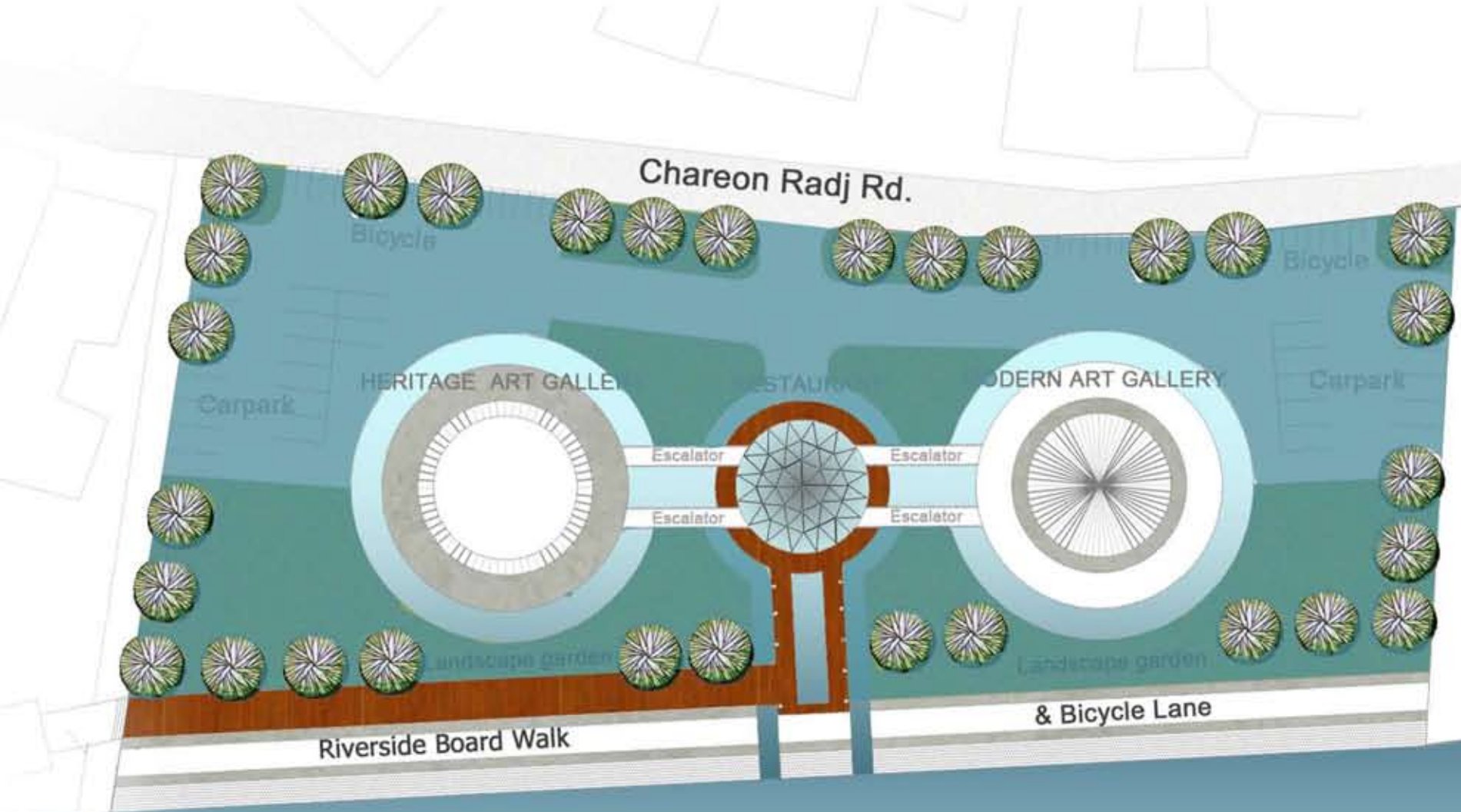
NORMAL TIME  
PLAN VIEW

Figure 69



3

ARCHITECTURAL DESIGN  
HERITAGE GALLERY & MODERN ART GALLERY



LOCATION PLAN

MAE PING RIVER

DURING FLOODS  
PLAN VIEW





## ARCHITECTURAL DESIGN

### HERITAGE GALLERY & MODERN ART GALLERY

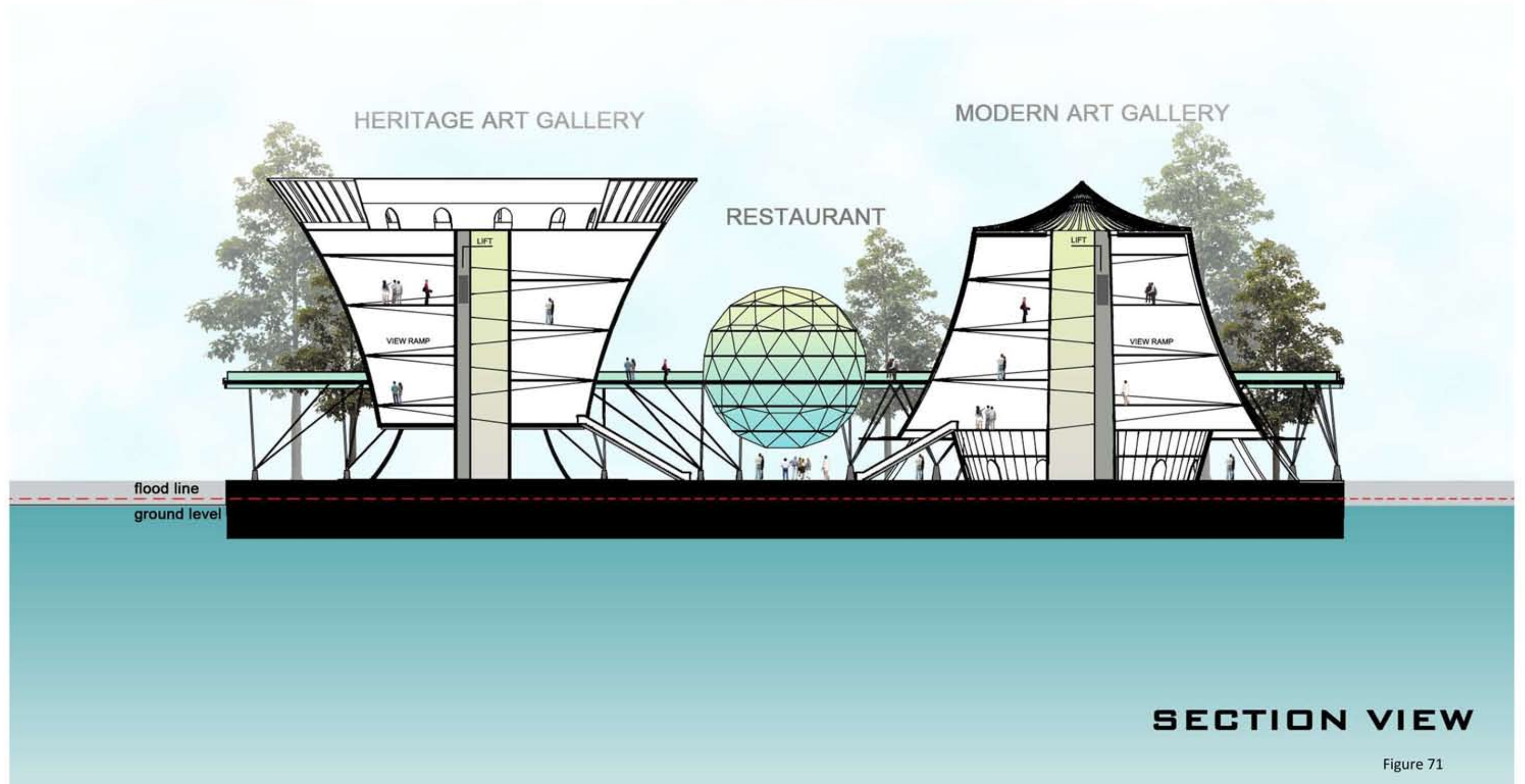
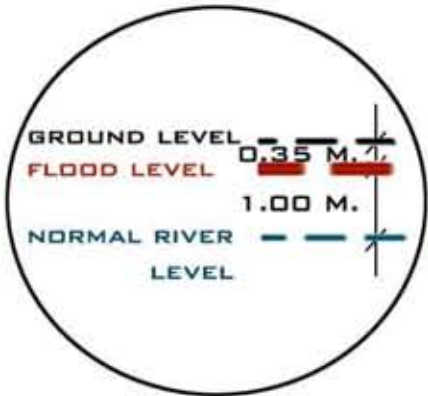


Figure 71



SECTION C-C

DETAIL



SEE DETAIL

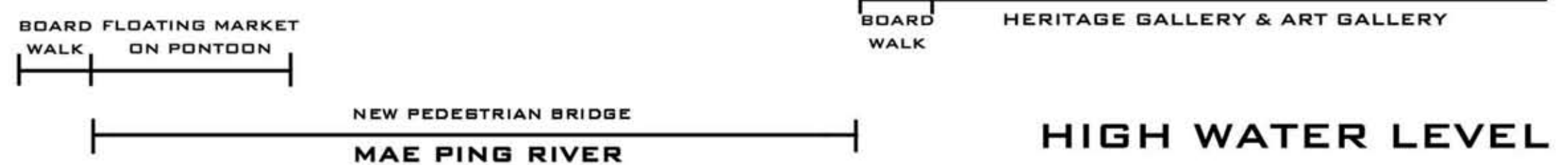
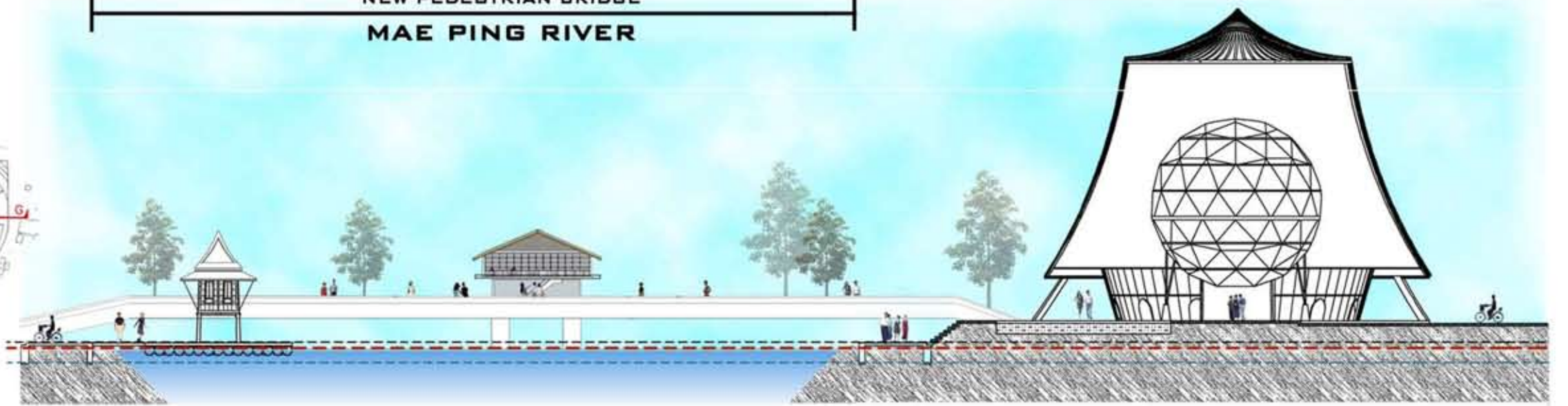


Figure 72



3

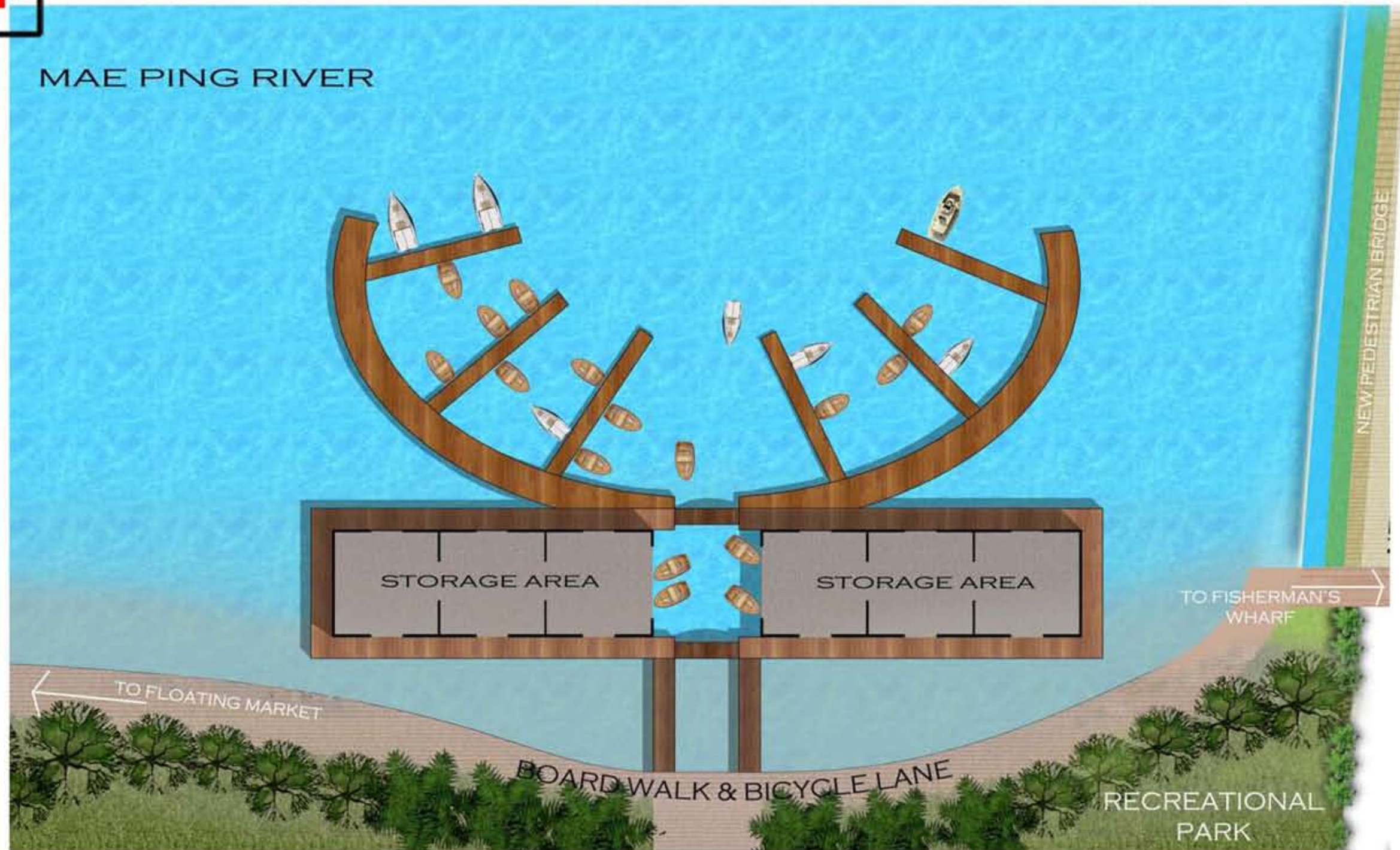
**ARCHITECTURAL DESIGN****HERITAGE GALLERY & MODERN ART GALLERY****HERITAGE ART GALLERY****MODERN ART GALLERY****RESTAURANT**

Figure 73



4

# THE NEW BOAT STATION - KAYAK CLUB [DURING NON-FLOOD TIME]



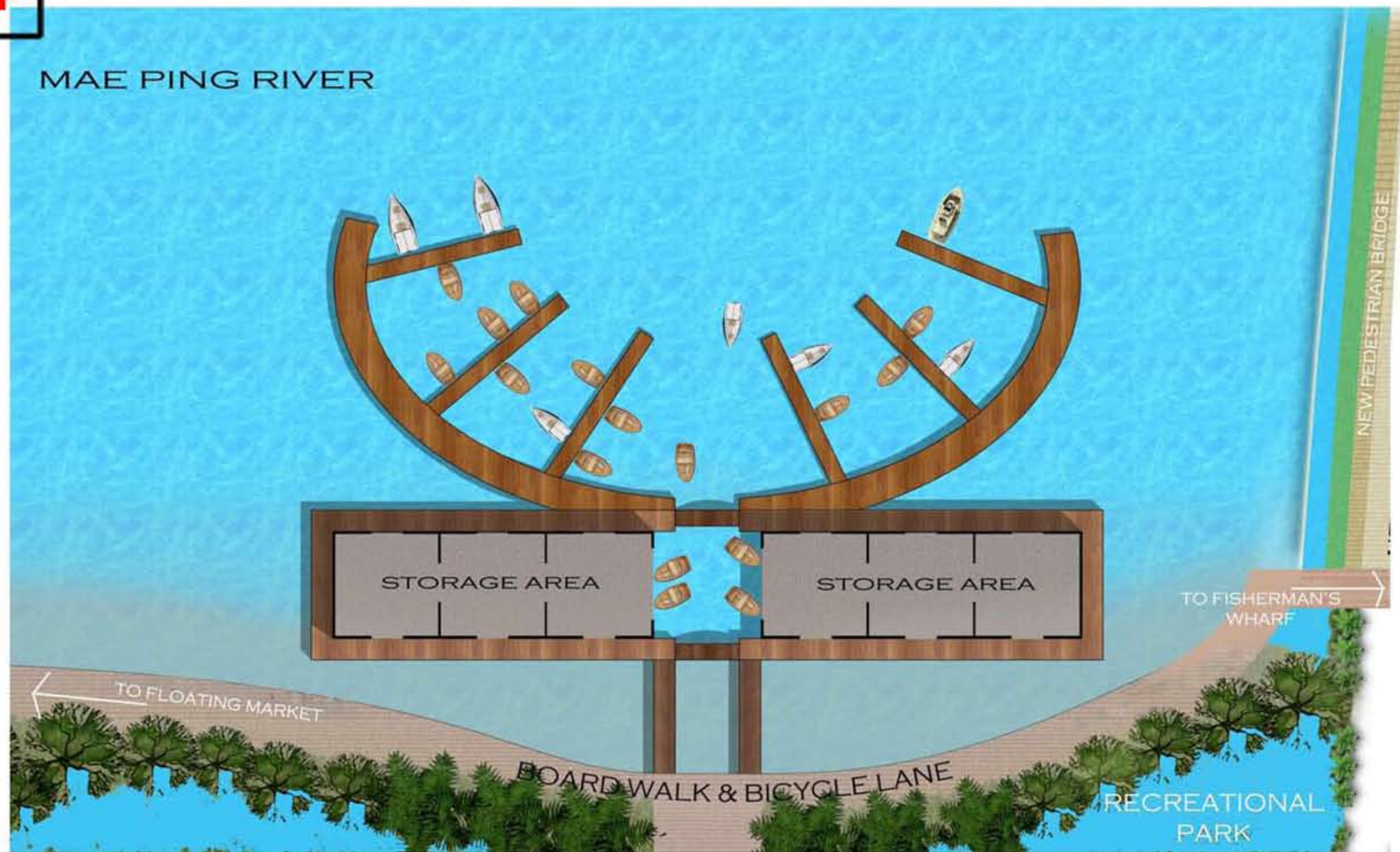
SCALE 1 : 750

## THE NEW BOAT STATION - PLAN



4

# THE NEW BOAT STATION - KAYAK CLUB [DURING FLOOD TIME]



SCALE 1 : 750

## THE NEW BOAT STATION - PLAN





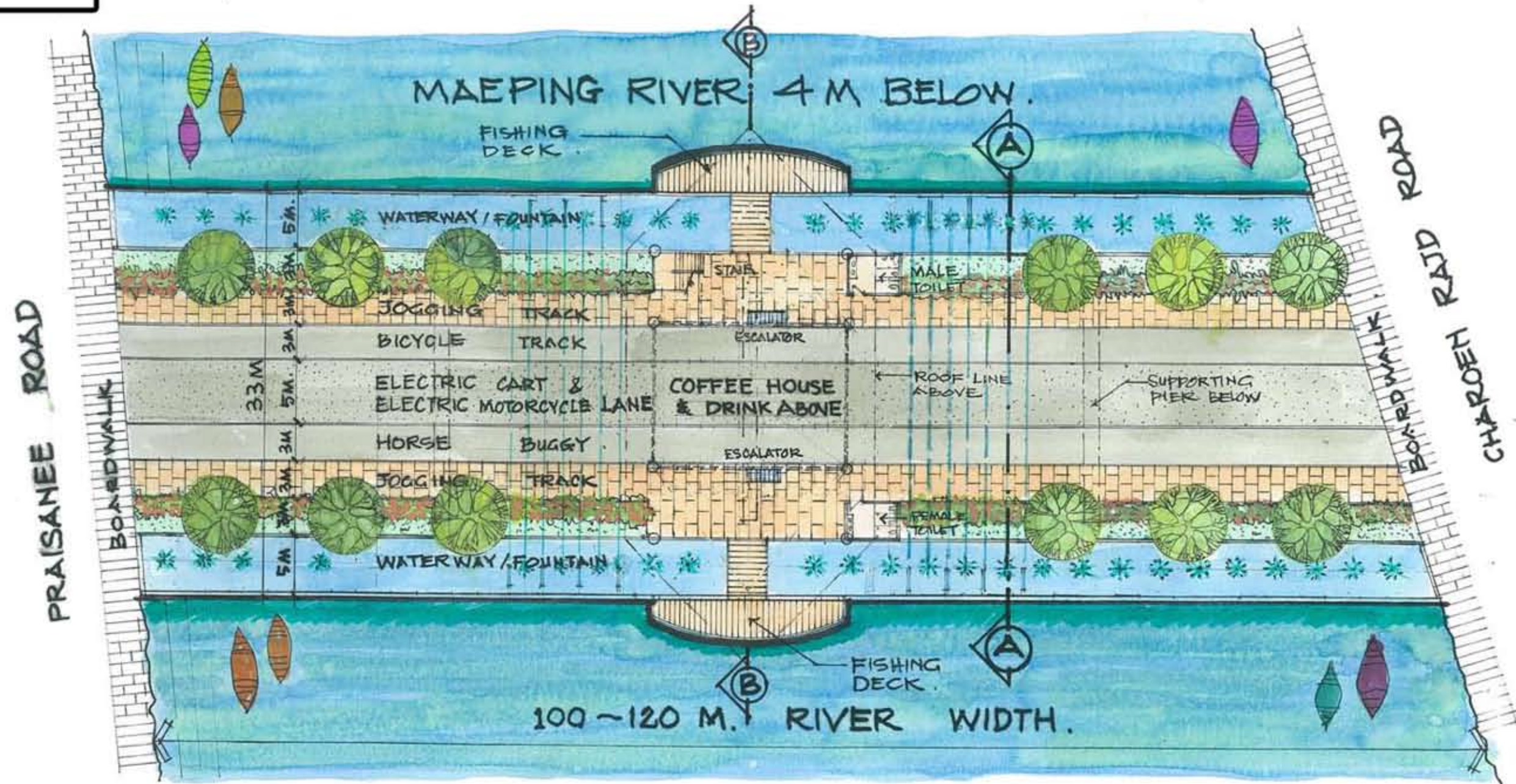
Figure 76



5

## ARCHITECTURAL DESIGN

### PEDESTRIAN BRIDGE WITH FISHING DECKS & COFFEE HOUSE



PLAN OF PEDESTRIAN BRIDGE.



**5****ARCHITECTURAL DESIGN****PEDESTRIAN BRIDGE WITH FISHING DECKS & COFFEE HOUSE**

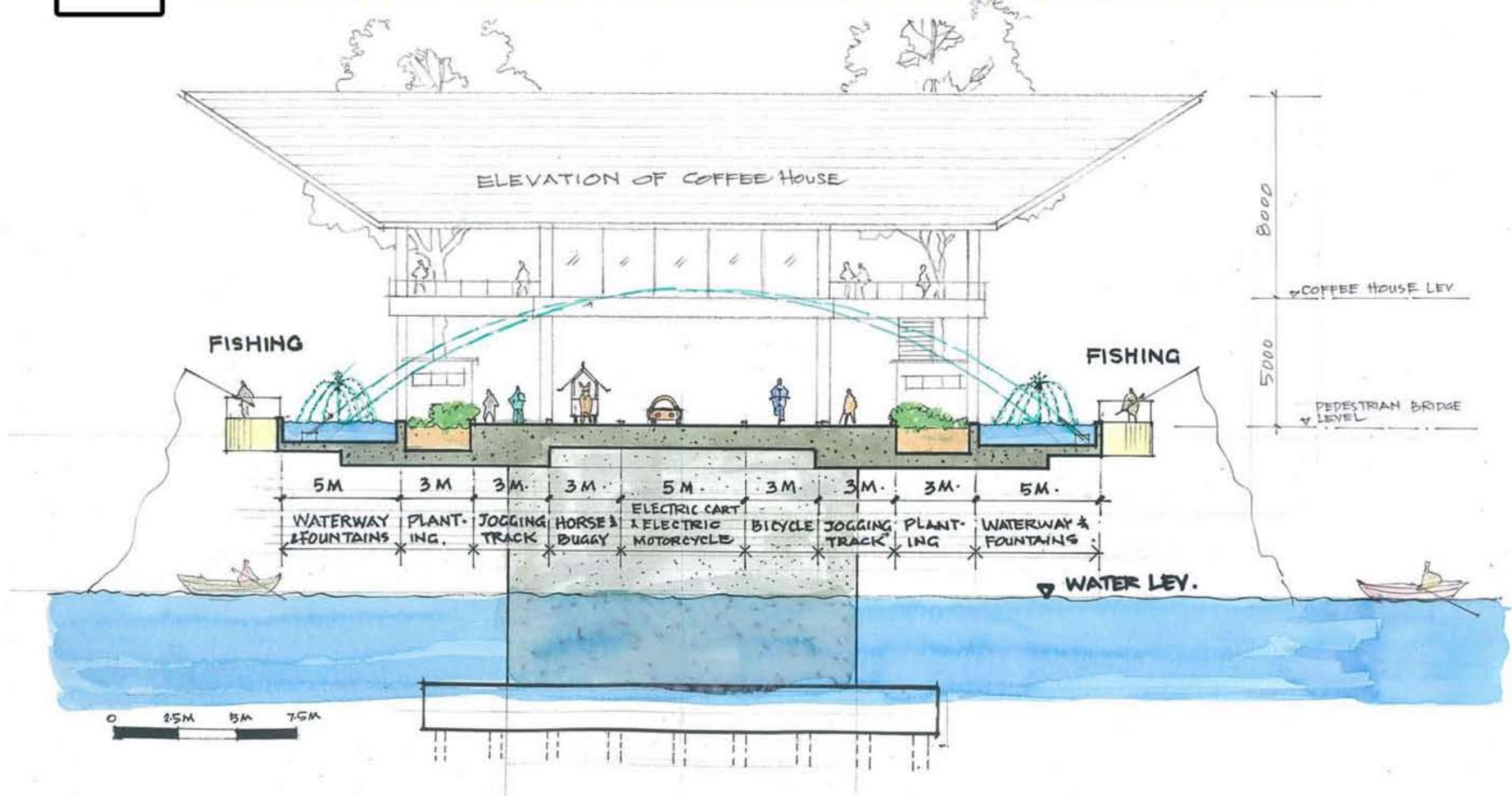
Figure 78



5

## ARCHITECTURAL DESIGN

### PEDESTRIAN BRIDGE WITH FISHING DECKS & COFFEE HOUSE



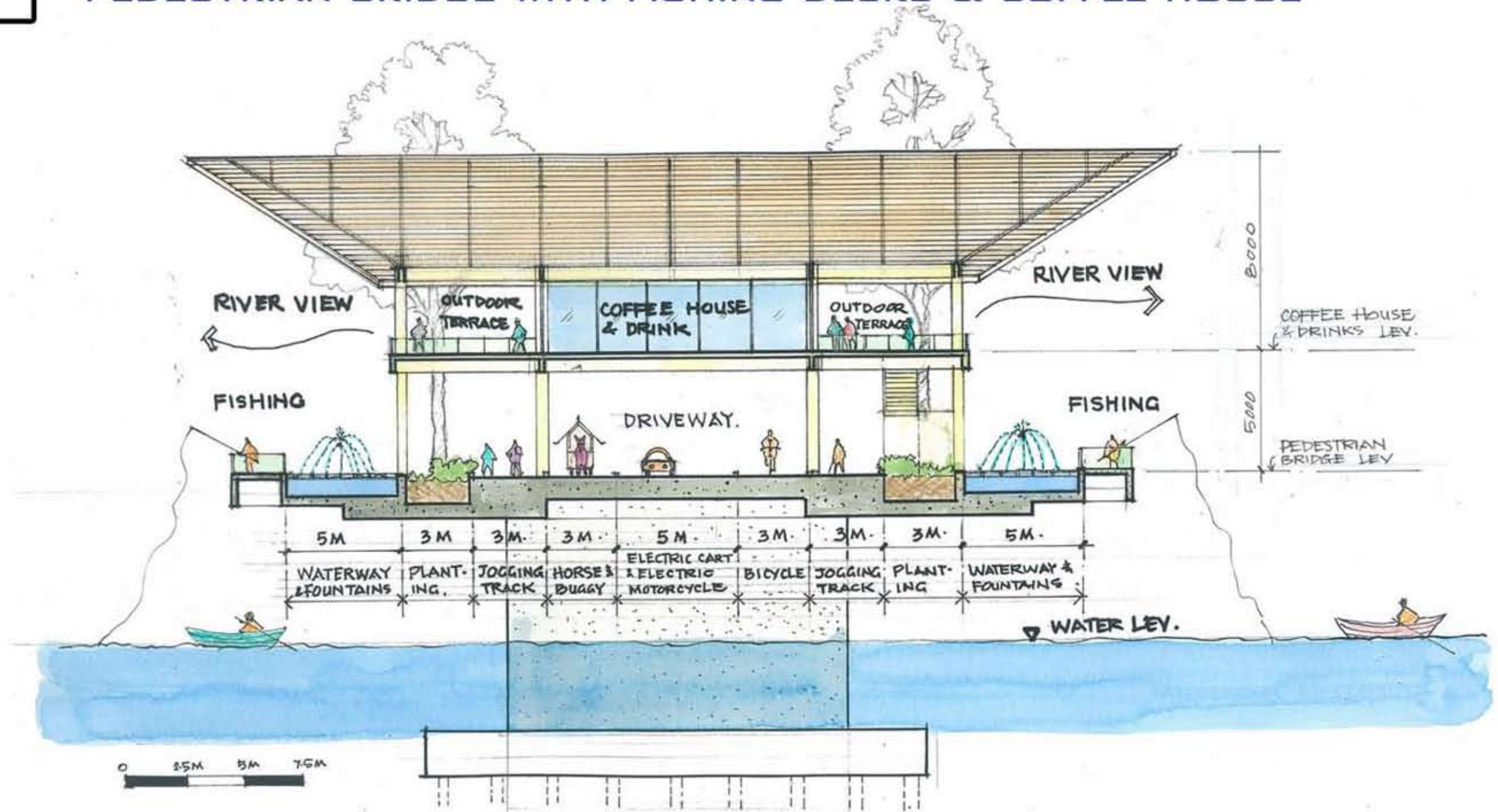
## SECTION A-A OF PEDESTRIAN BRIDGE



5

## ARCHITECTURAL DESIGN

### PEDESTRIAN BRIDGE WITH FISHING DECKS & COFFEE HOUSE



SECTION B-B OF PEDESTRIAN BRIDGE



**5**

## ARCHITECTURAL DESIGN

PEDESTRIAN BRIDGE WITH FISHING DECKS & COFFEE HOUSE



Figure 81



6

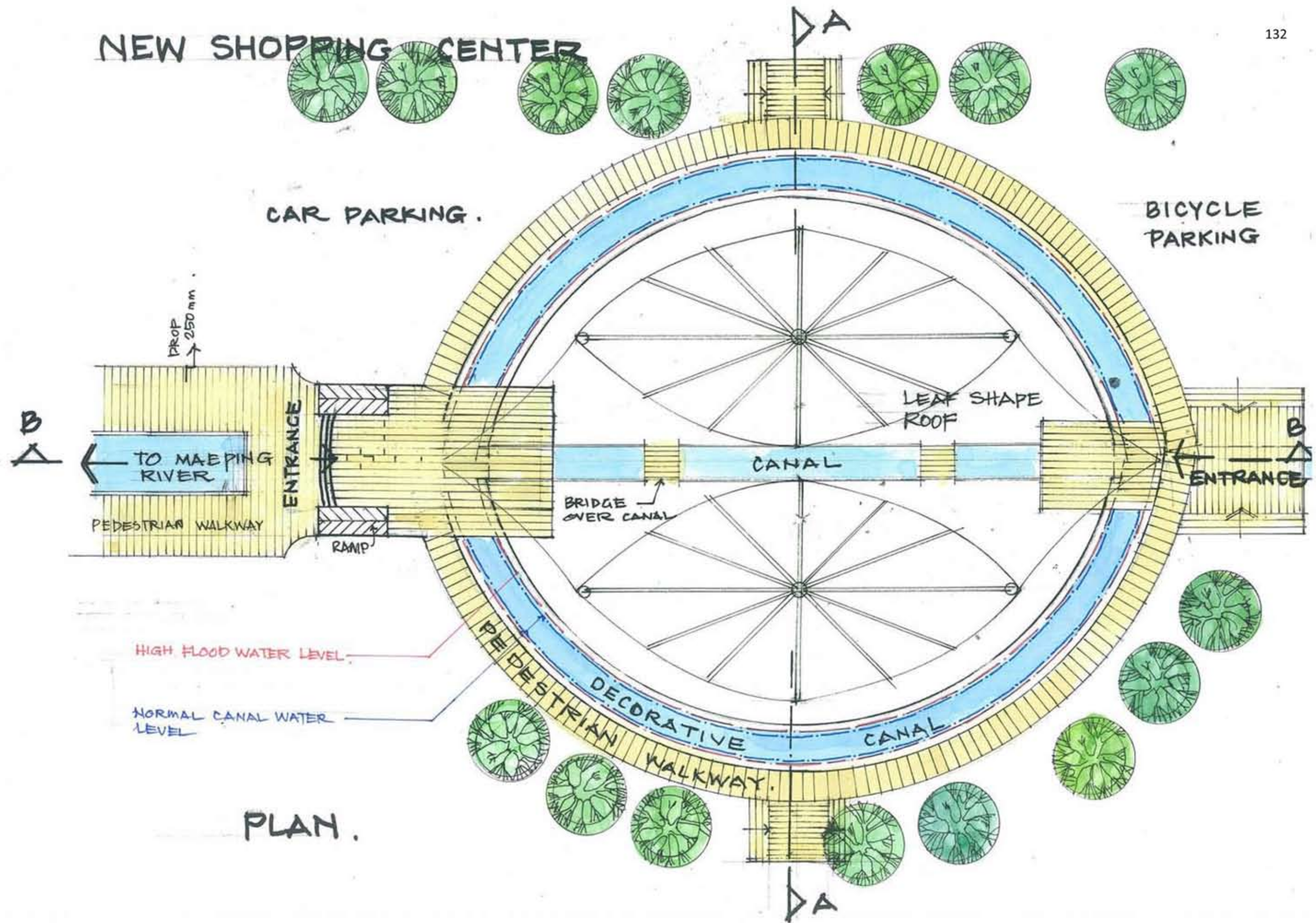
ARCHITECTURAL DESIGN  
THE NEW SHOPPING CENTER



PLAN VIEW

Figure 82





PLAN.

Figure 83





## ARCHITECTURAL DESIGN

### CHIANGMAI NEW SHOPPING CENTER

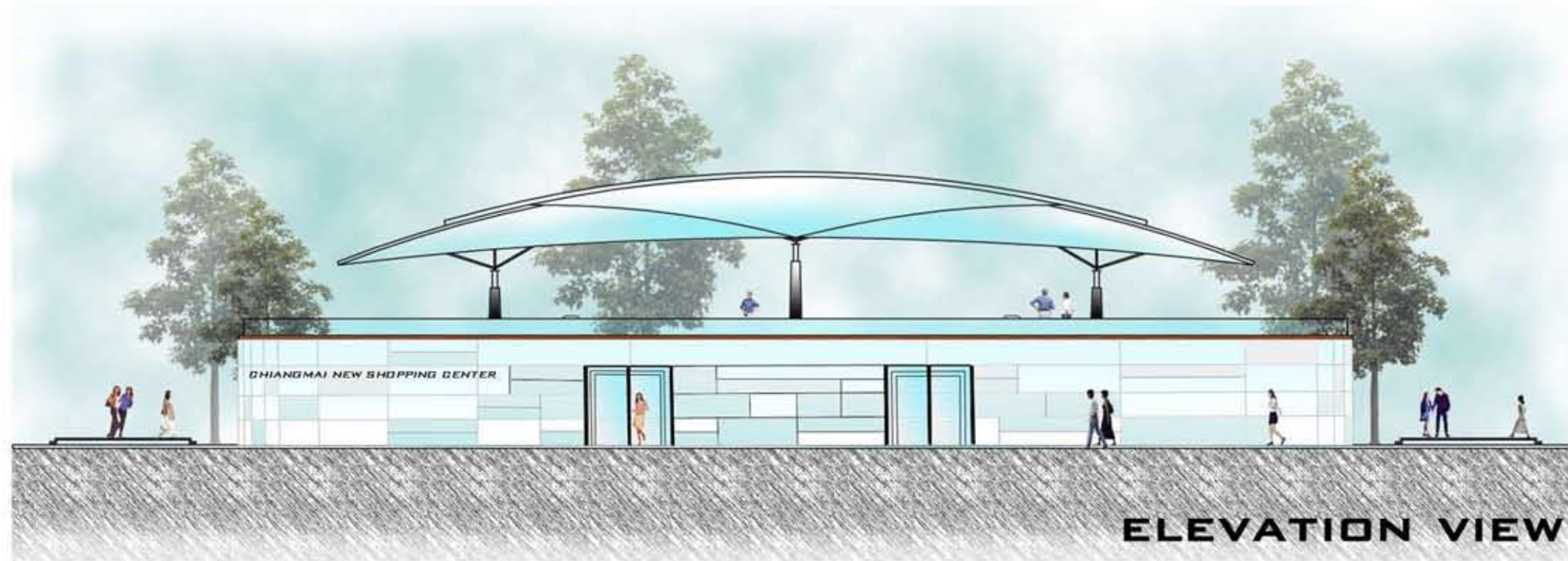
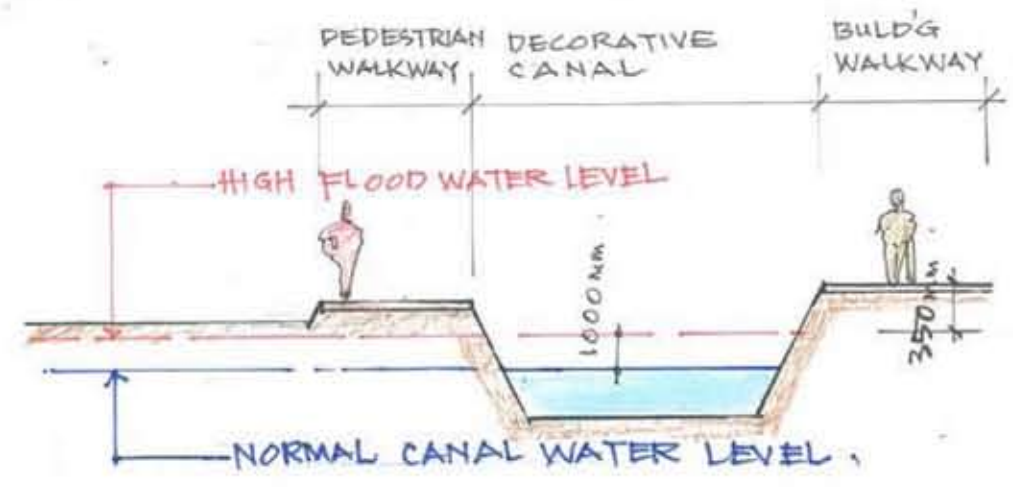
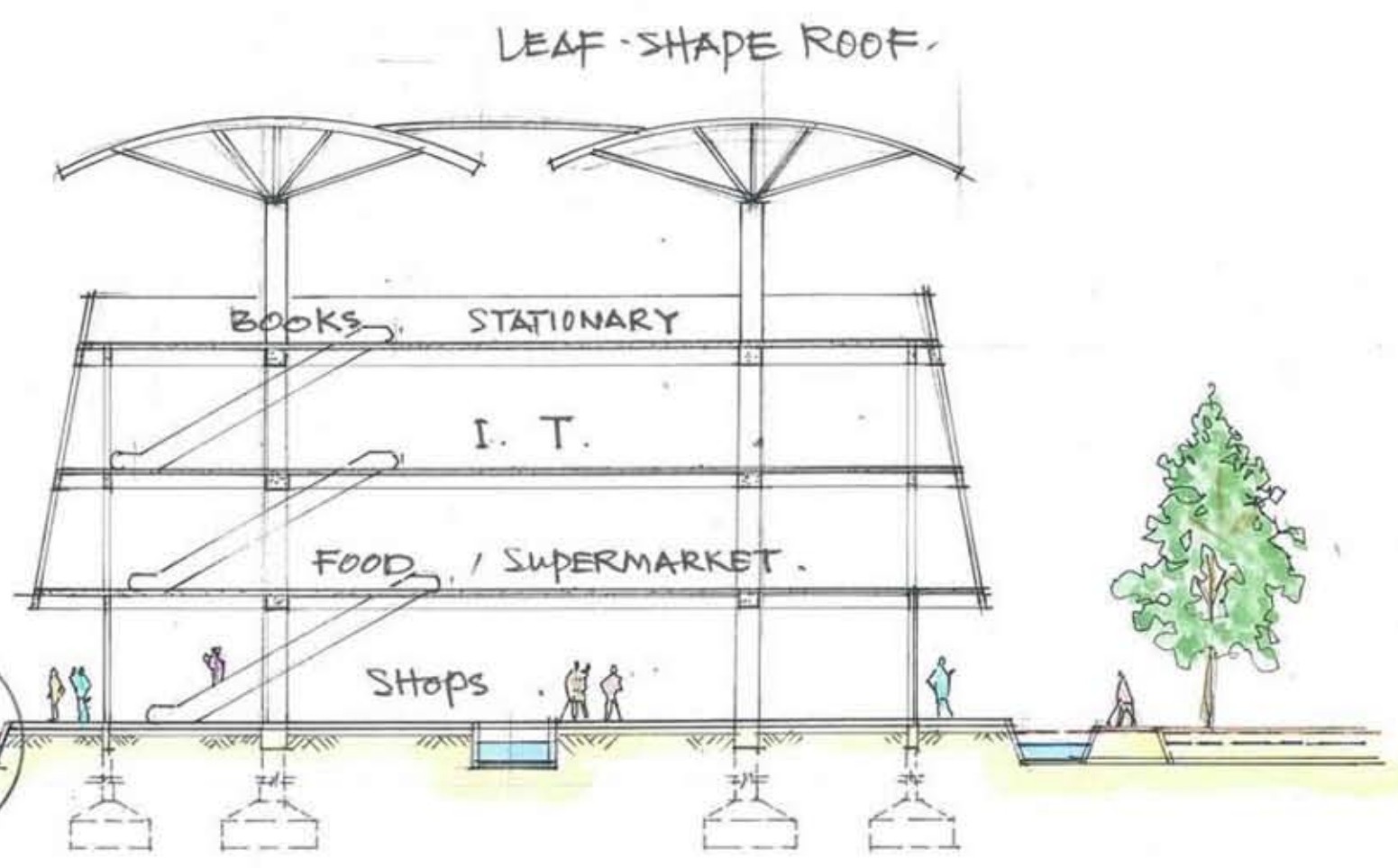
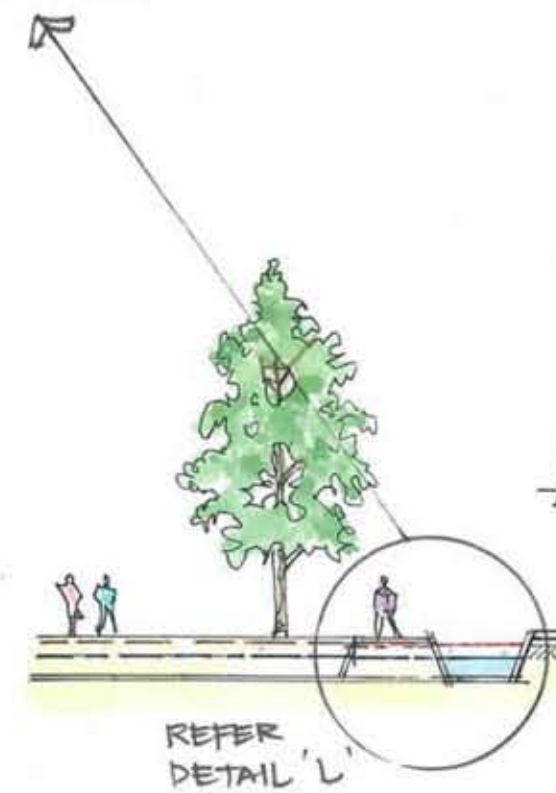


Figure 84



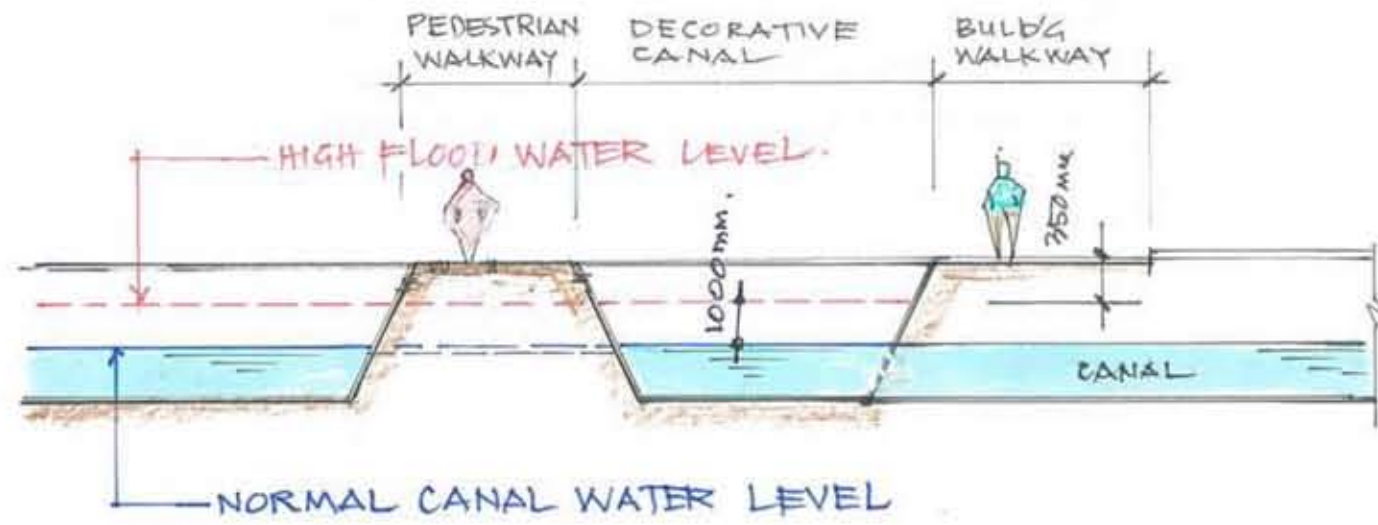
**DETAIL 'L'**



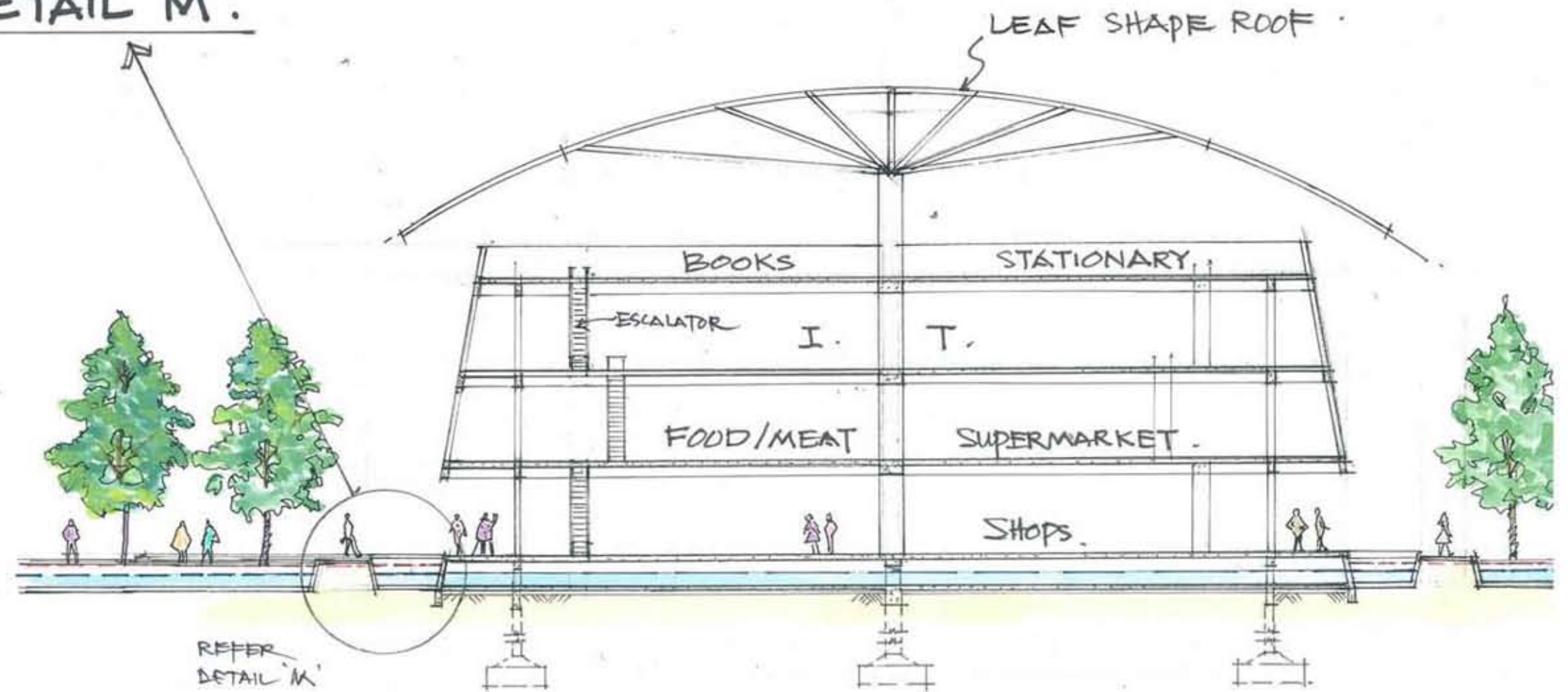
**SECTION A-A.**

Figure 85





### DETAIL M.



### SECTION B-B.





Figure 87





Figure 88



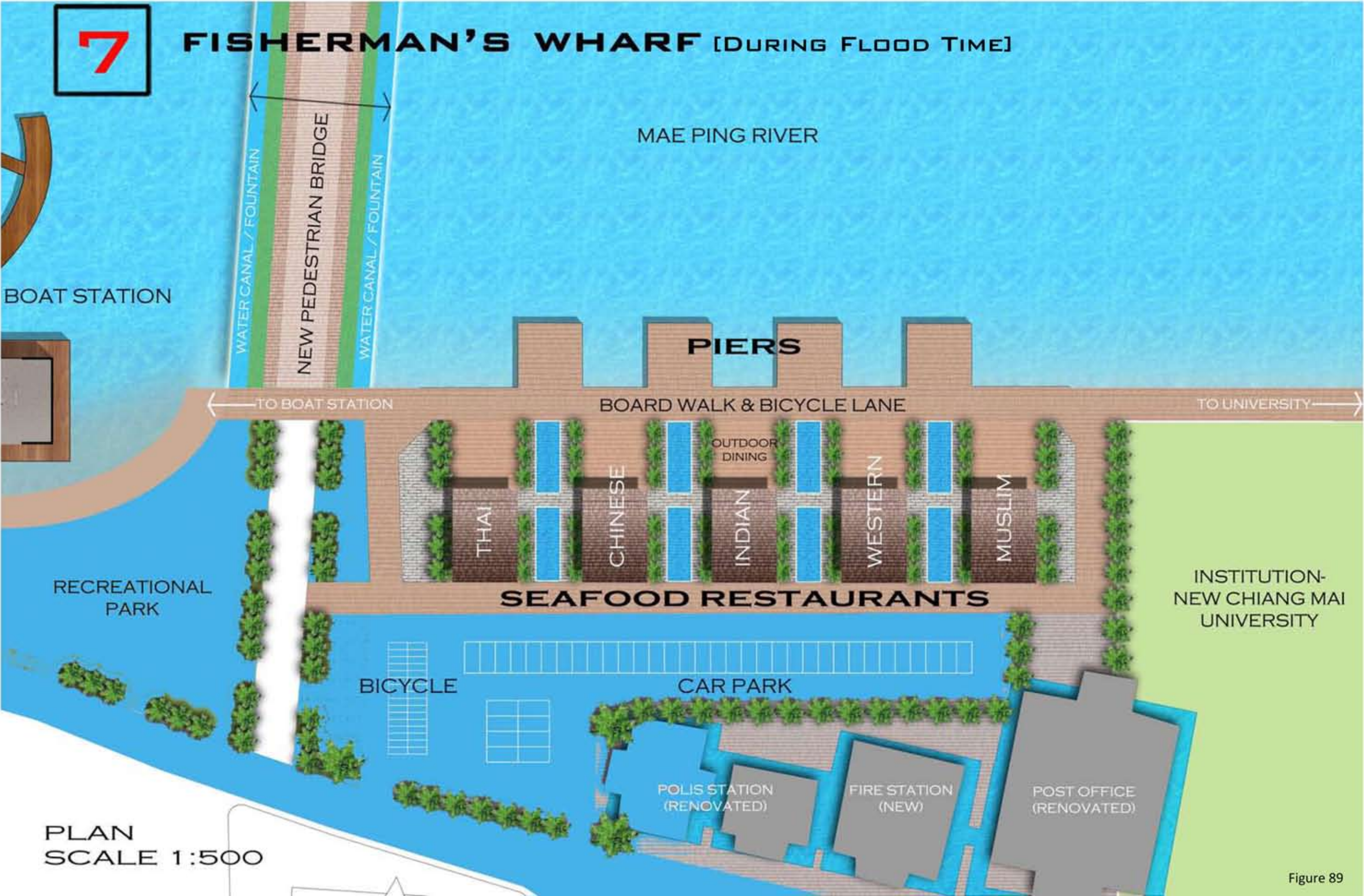


Figure 89





Figure 90





## ARCHITECTURAL DESIGN

### NEW CHIANG MAI UNIVERSITY [DURING NON-FLOOD TIME]



#### LEGEND

1. UNIVERSITY FORECOURT
  2. LECTURE THEATER
  3. STUDENT HOUSING
  4. PROFESSOR HOUSING
  5. SCHOOL OF MARINE LIFE & AQUACULTURE
  6. LANNA CULTURAL & ETHNIC RESEARCH CENTER
  7. SCHOOL OF SUSTAINABLE GREEN ENVIRONMENT
  8. BUSINESS ADMINISTRATION (MBA)
  9. UNIVERSITY CLUB HOUSE
  10. ROOFTOP FLOWERS & ORGANIC AGRICULTURE
-  LANDSCAPE GARDENING WITH CAR & BICYCLE PARKING

MAE PING RIVER

BOARD WALK & BICYCLE LANE

FISHERMAN'S WHARF

NAWARAT BRIDGE

CAR PARK

BICYCLE PARK

PHAISANEE ROAD

PLAN VIEW

Figure 91





## ARCHITECTURAL DESIGN NEW CHIANG MAI UNIVERSITY [DURING FLOOD TIME]



### LEGEND

1. UNIVERSITY FORECOURT
  2. LECTURE THEATER
  3. STUDENT HOUSING
  4. PROFESSOR HOUSING
  5. SCHOOL OF MARINE LIFE & AQUACULTURE
  6. LANNA CULTURAL & ETHNIC RESEARCH CENTER
  7. SCHOOL OF SUSTAINABLE GREEN ENVIRONMENT
  8. BUSINESS ADMINISTRATION (MBA)
  9. UNIVERSITY CLUB HOUSE
  10. ROOFTOP FLOWERS & ORGANIC AGRICULTURE
-  LANDSCAPE GARDENING WITH CAR & BICYCLE PARKING



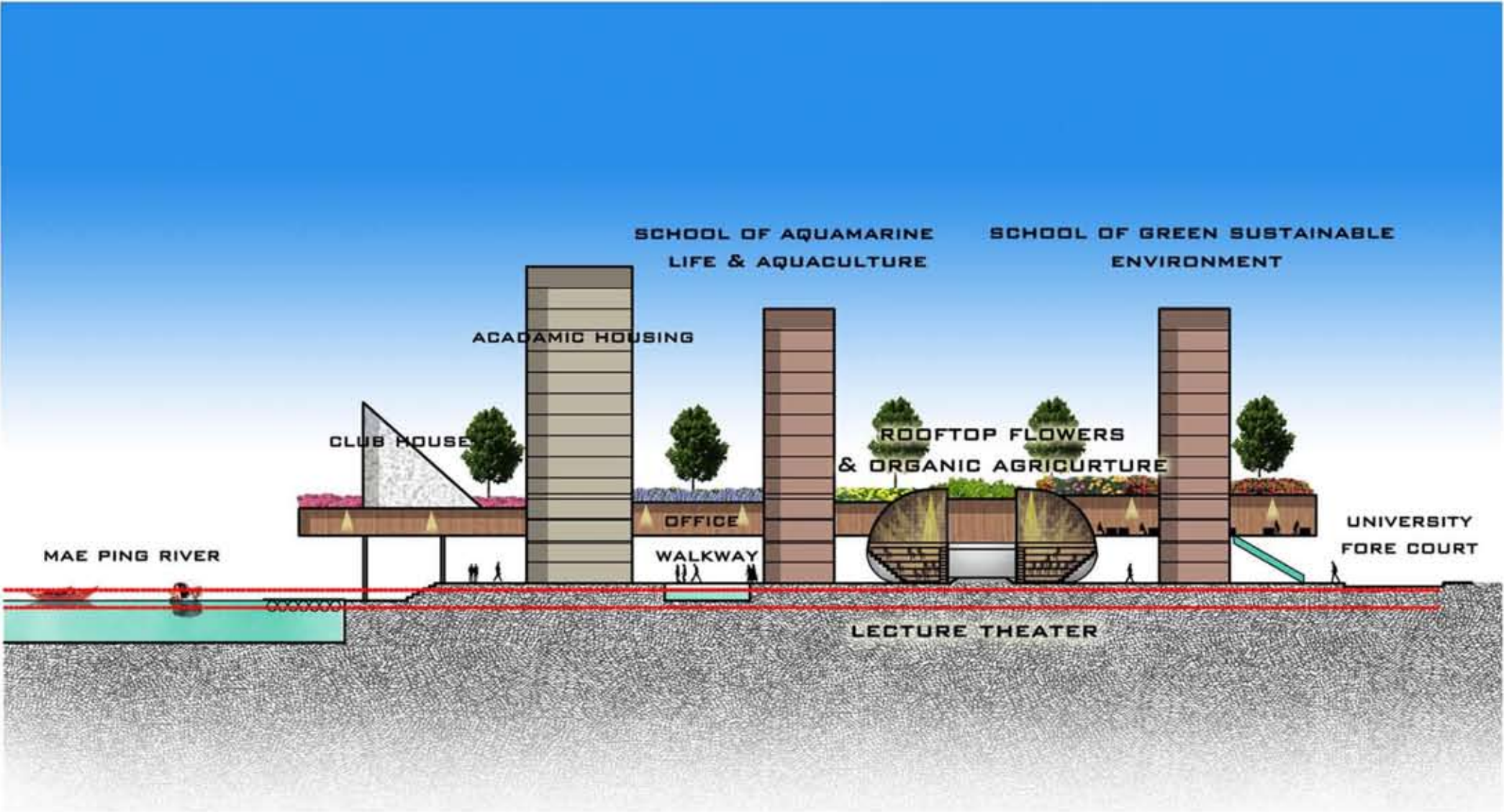
**PLAN VIEW**

Figure 92





**ARCHITECTURAL DESIGN**  
**NEW CHIANG MAI UNIVERSITY**



**ELEVATION VIEW**

Figure 93



# SECTION F - F

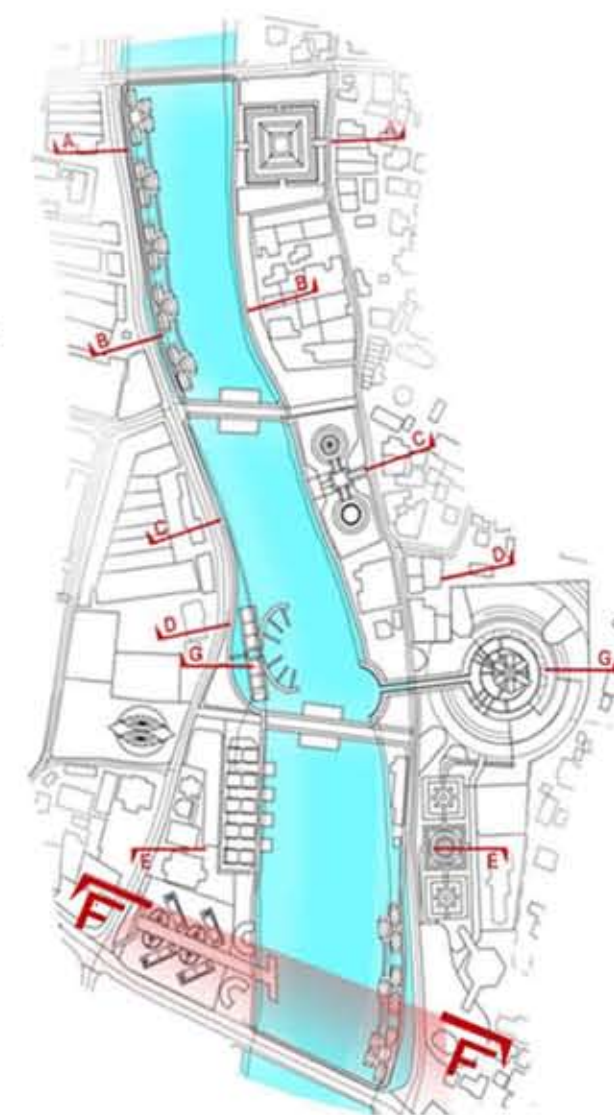
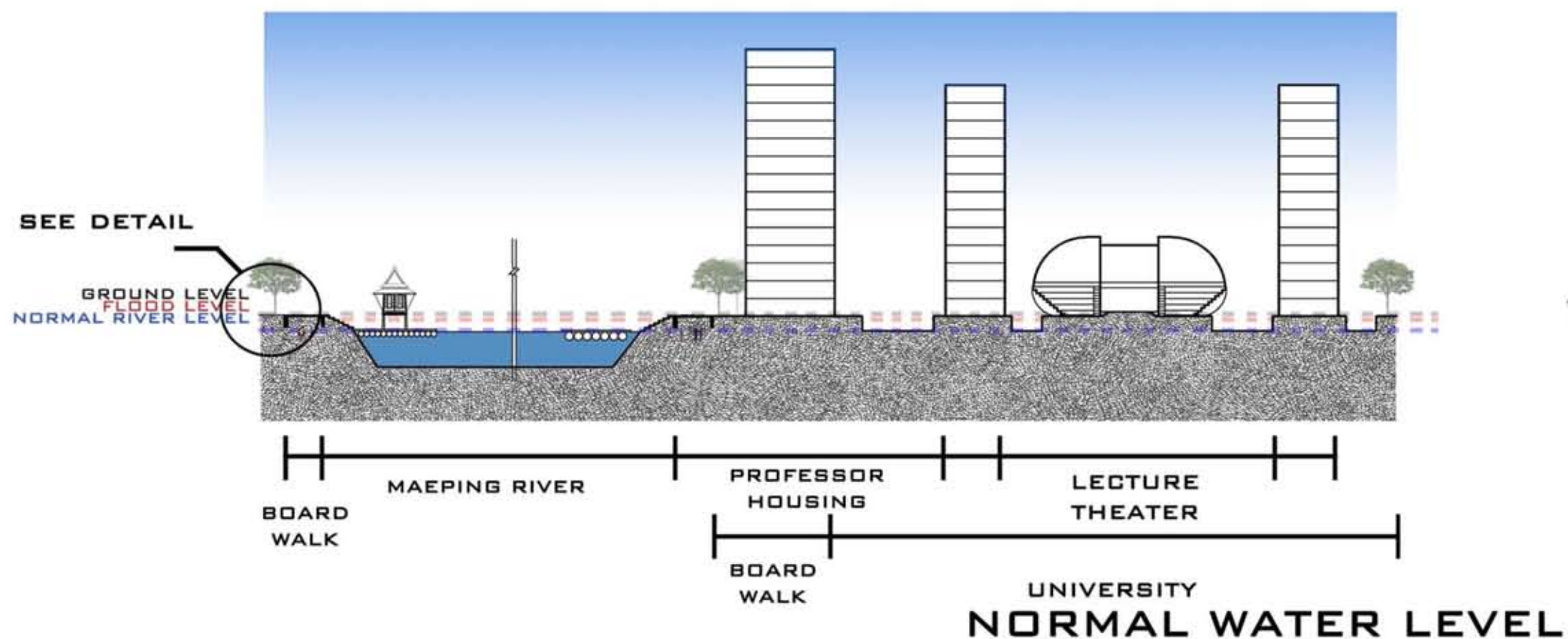
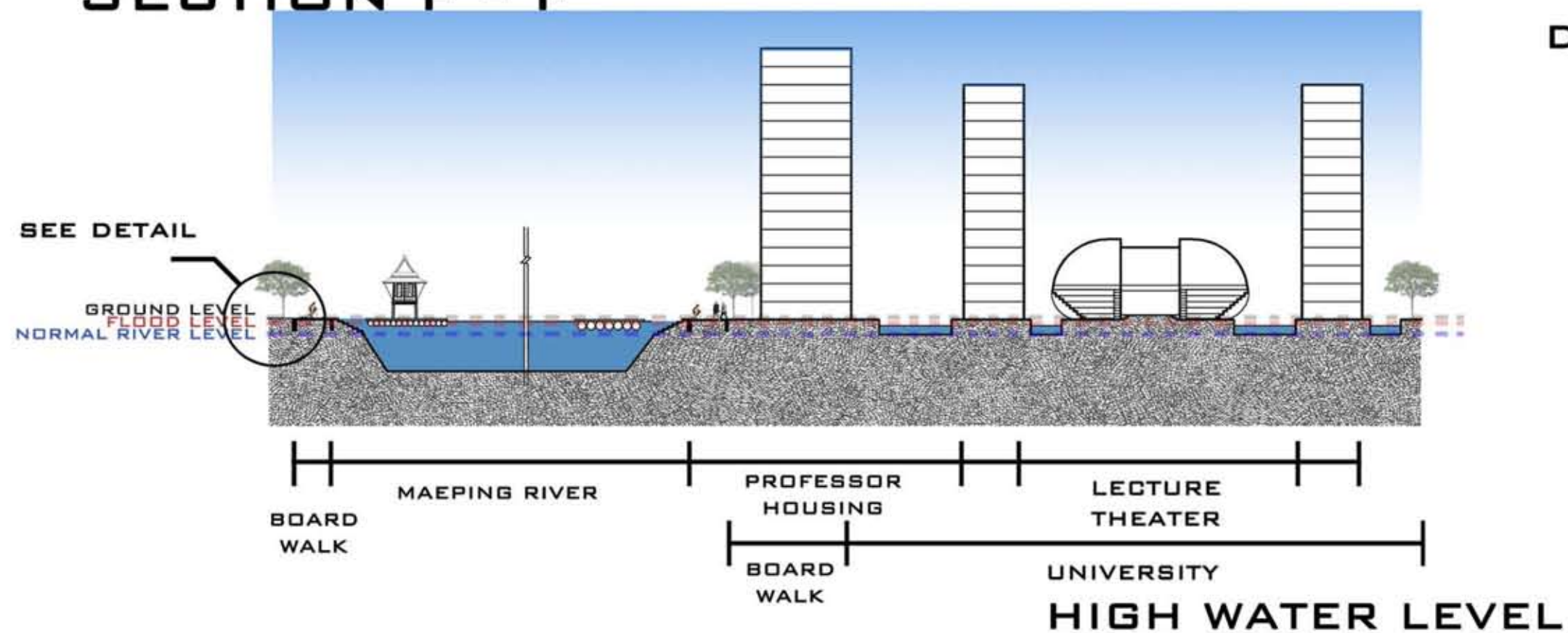


Figure 94







9

# ARCHITECTURAL DESIGN THE CHIANGMAI ENTERTAINMENT CENTER

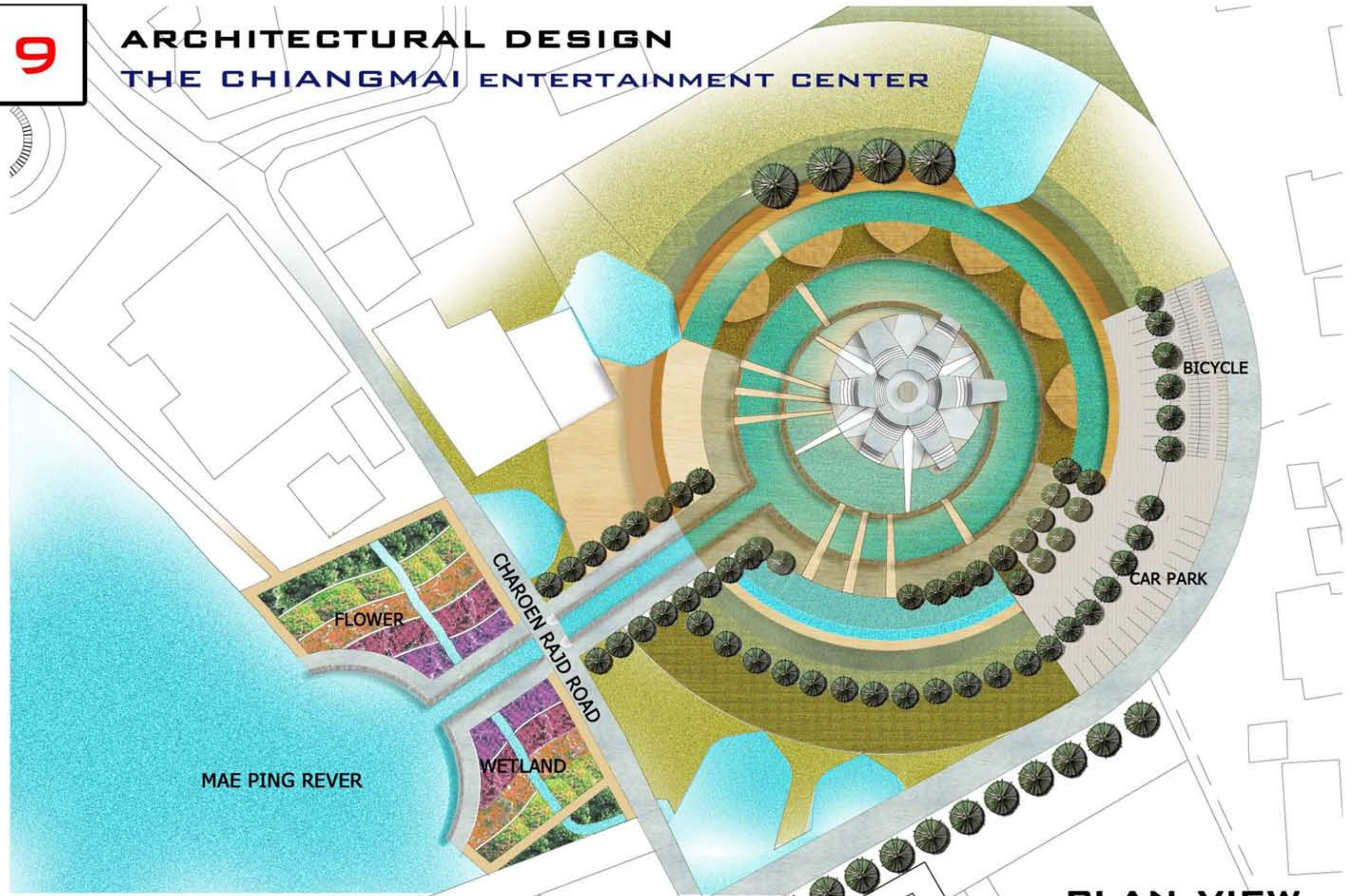
**PLAN VIEW**

Figure 96



9

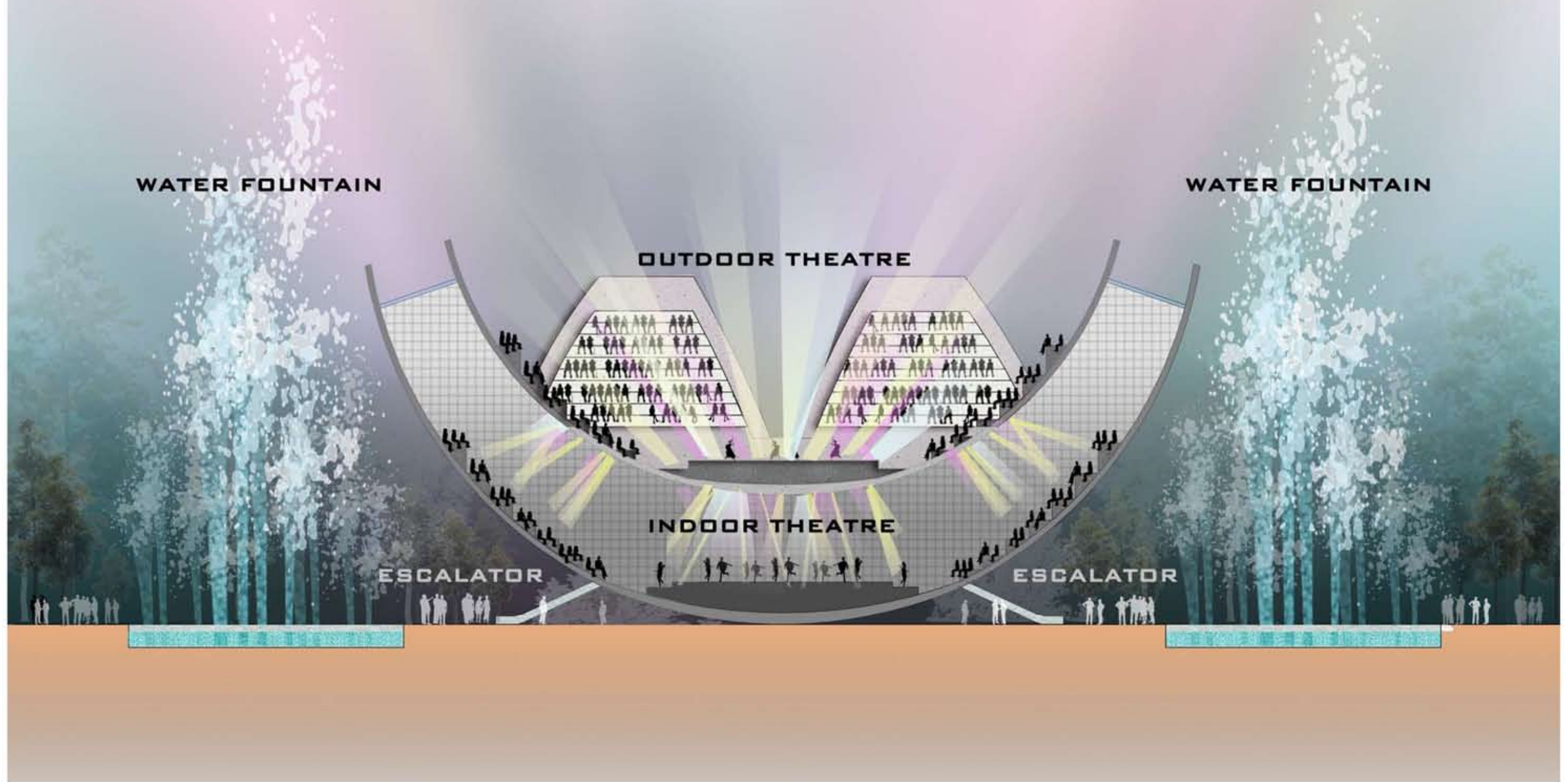
**ARCHITECTURAL DESIGN****THE CHIANGMAI ENTERTAINMENT CENTER****SECTION VIEW**

Figure 97



## ARCHITECTURAL DESIGN

**9**

### THE CHIANG MAI ENTERTAINMENT CENTER

OUTDOOR AMPHITHEATRE PERFORMANCE IN SESSION

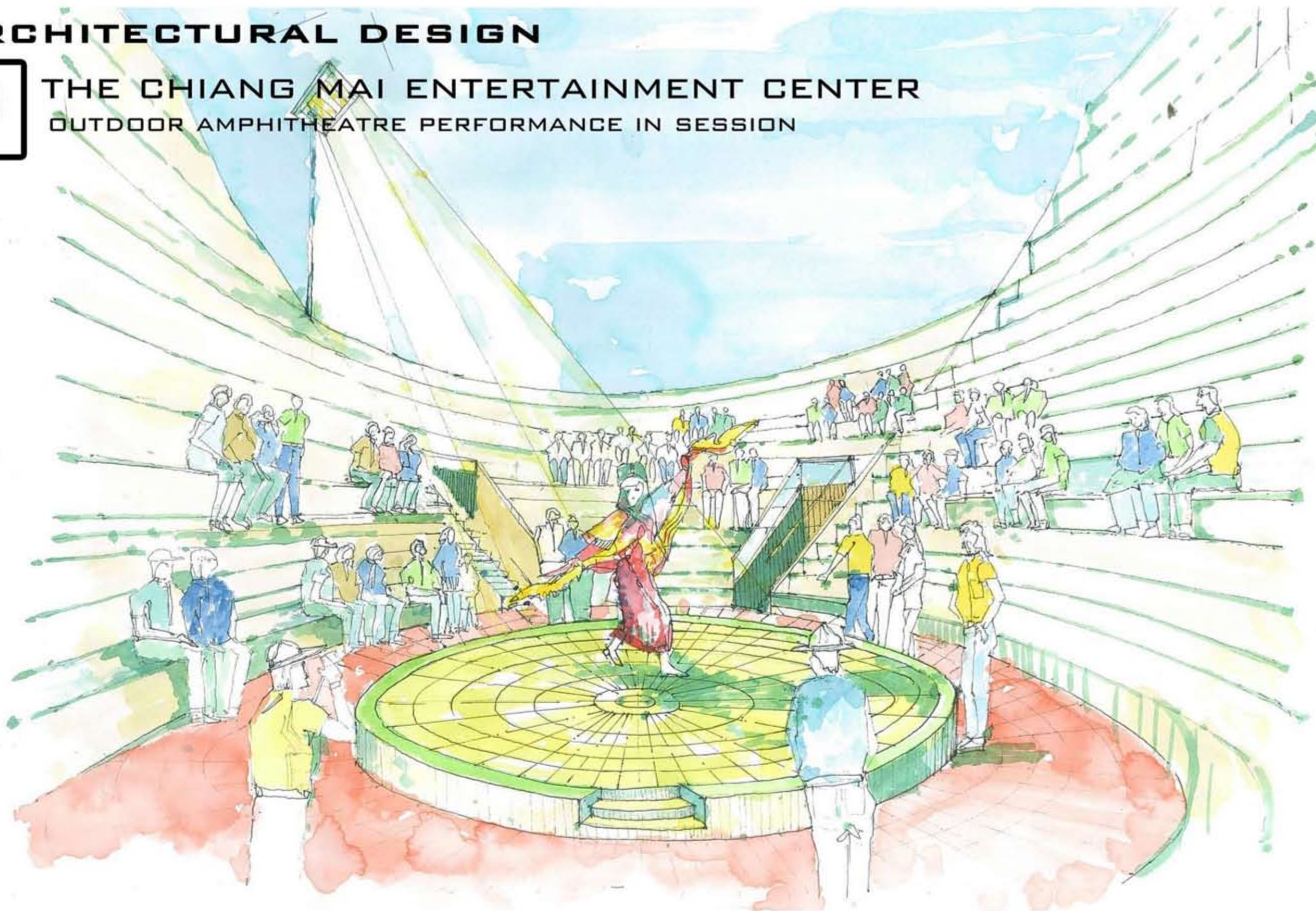


Figure 98



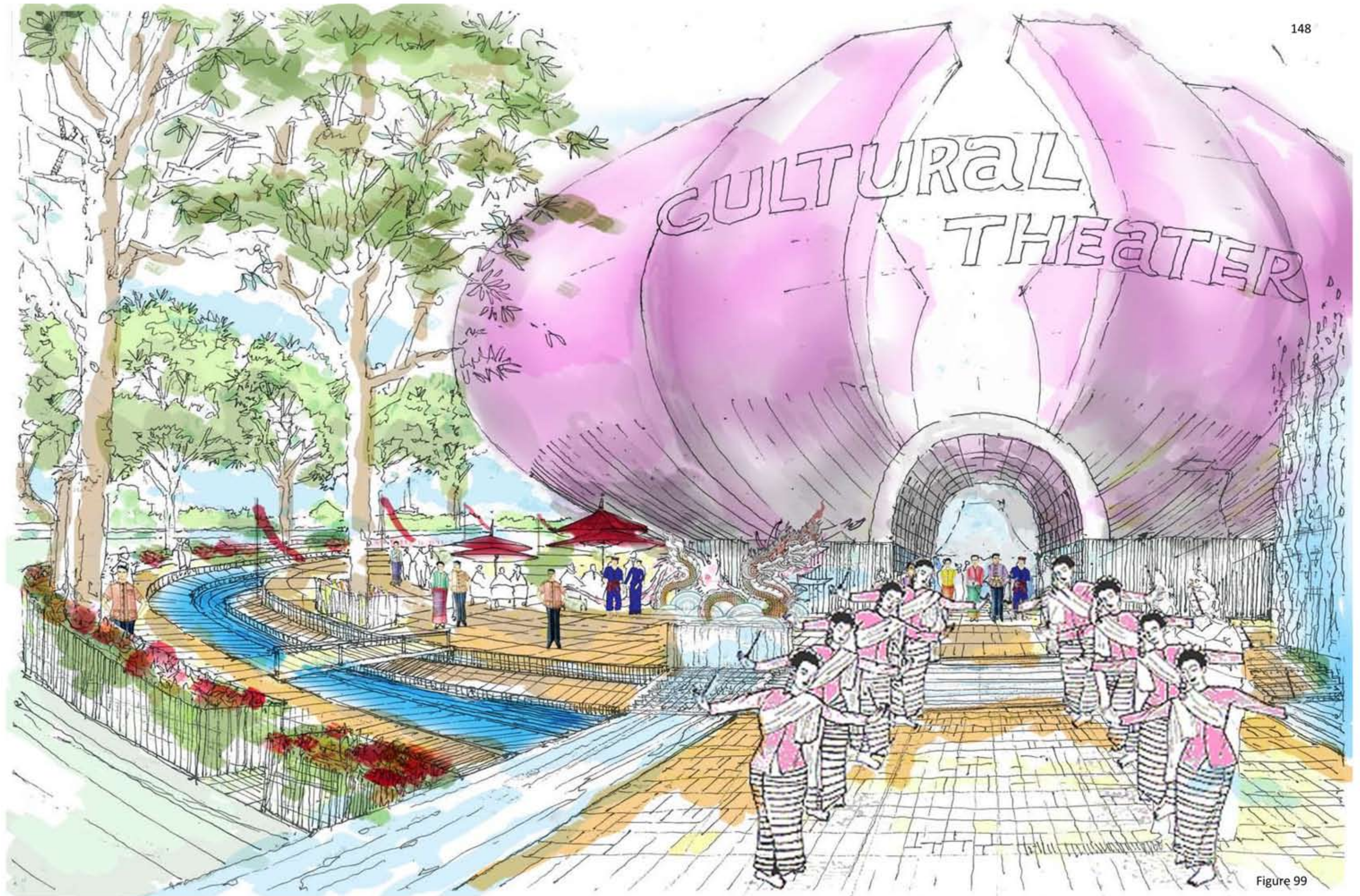


Figure 99



9

## ARCHITECTURAL DESIGN

## THE CHIANGMAI ENTERTAINMENT CENTER

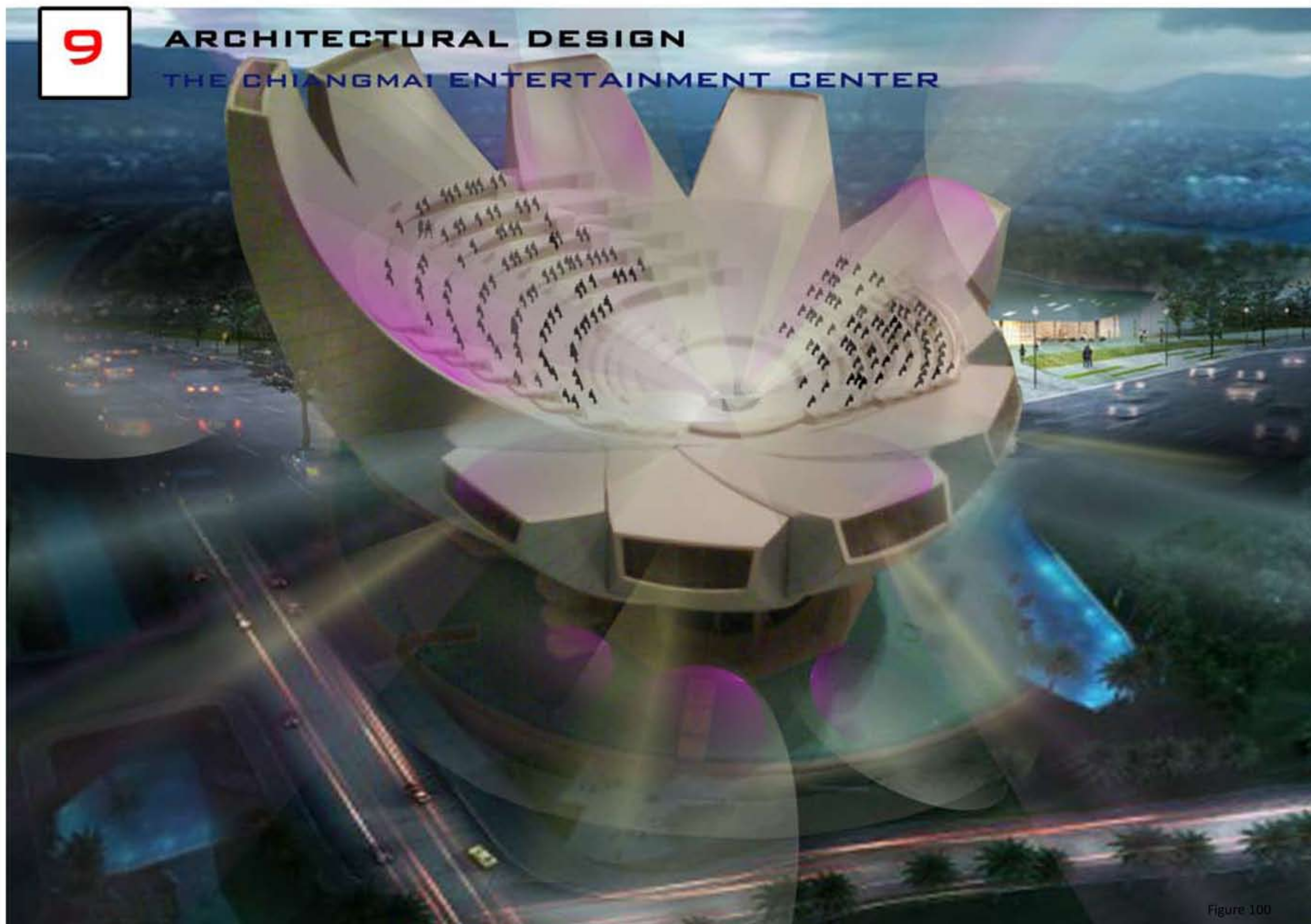
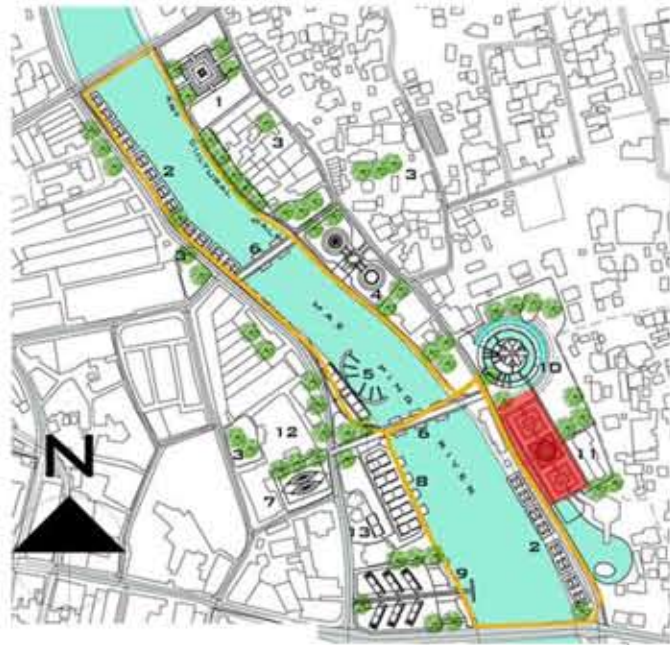


Figure 100



10

ARCHITECTURAL DESIGN  
SPA MEDITATION CENTER CENTER



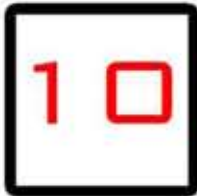
LOCATION PLAN



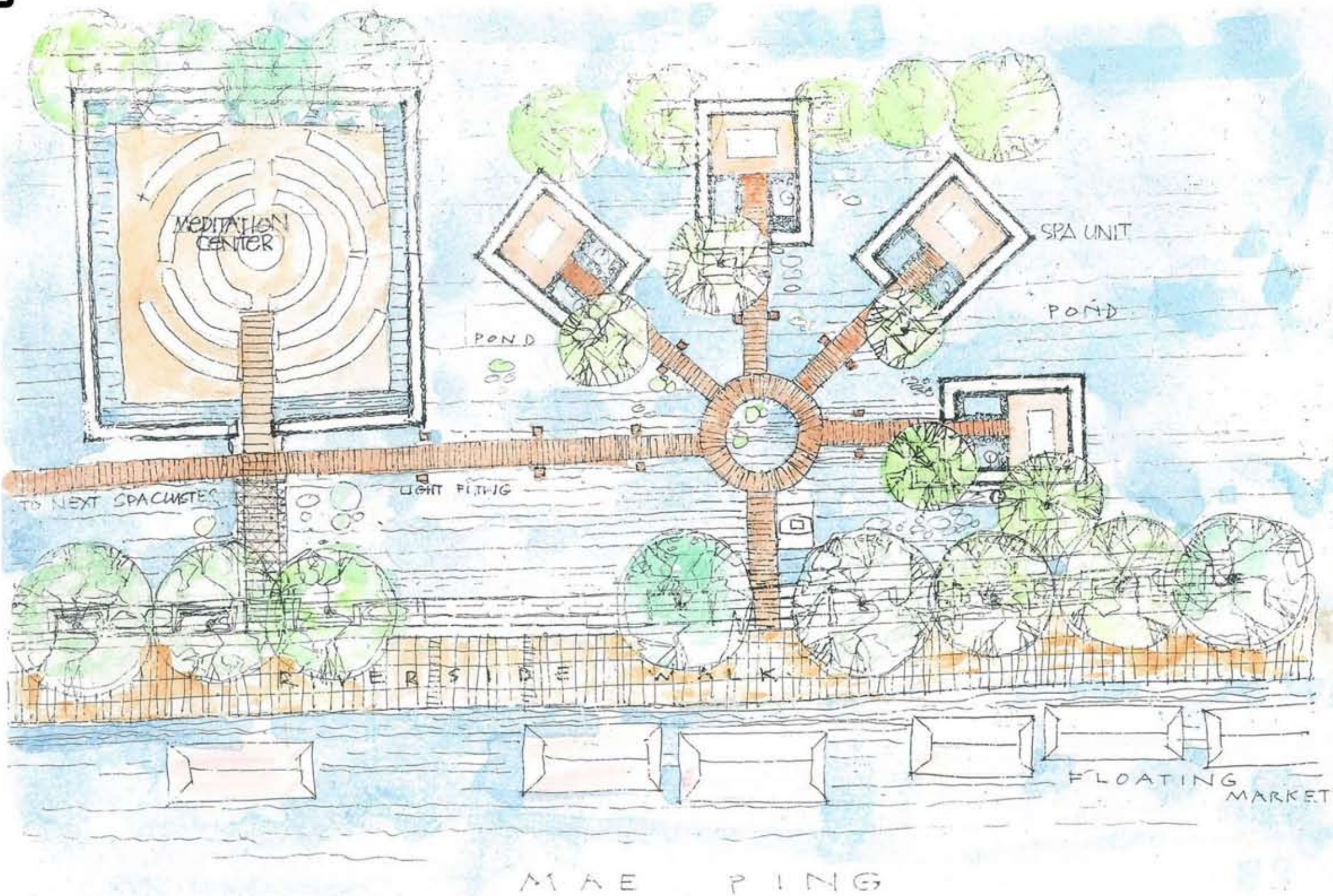
PLAN VIEW

Figure 101





ARCHITECTURAL DESIGN  
SPA & MEDITATION



Scale 1:200

Figure 102



10

# ARCHITECTURAL DESIGN

## SPA & MEDITATION

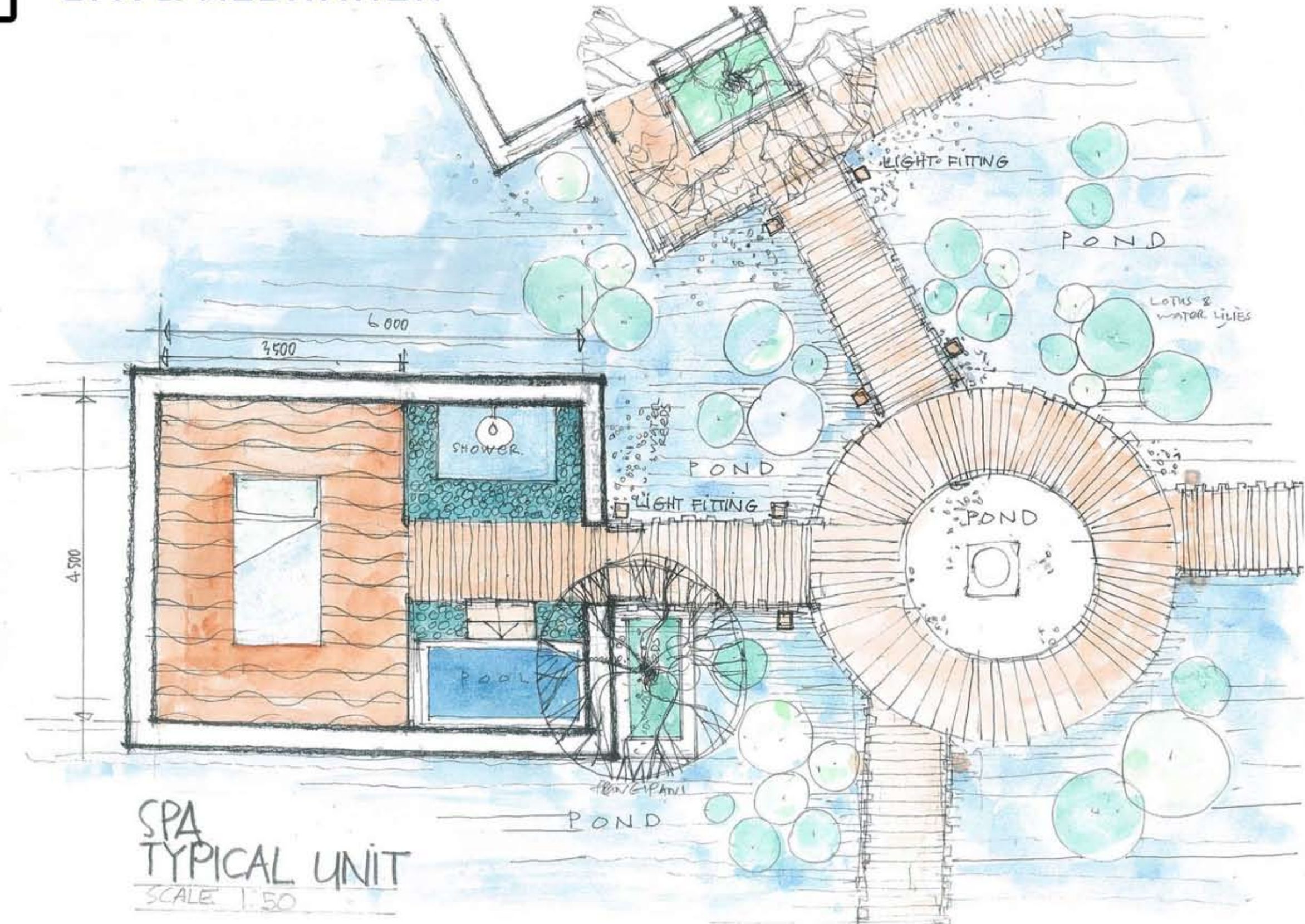


Figure 103



# SECTION E - E

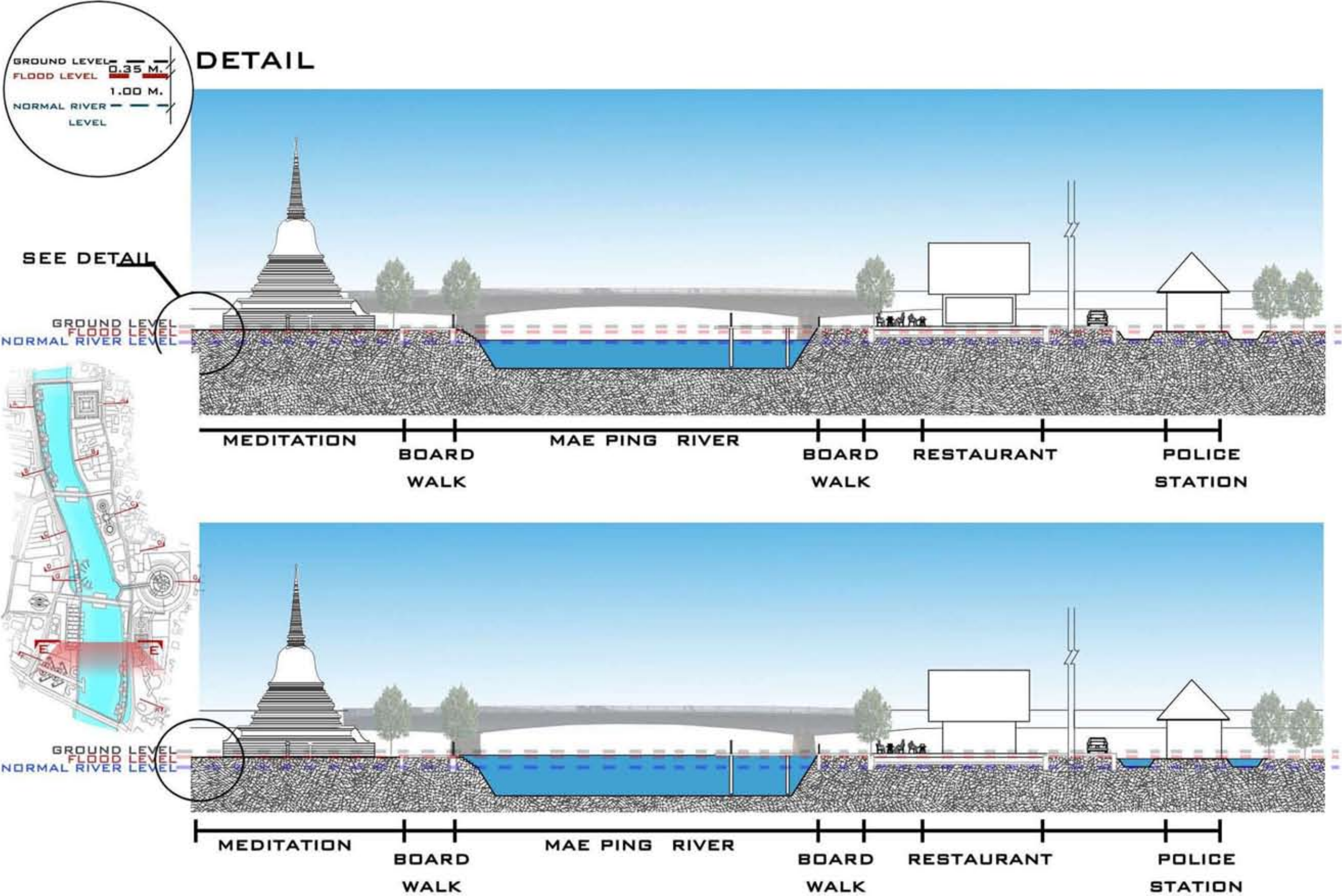
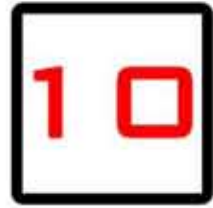


Figure 104





## ARCHITECTURAL DESIGN

### SPA & MEDITATION



Figure 105







# CHIVA WARIN CENTER BY THE MAE PING RIVER CHIANGMAI

AERIAL PERSPECTIVE SHOWING THE OVERALL PROJECT SITE IN  
RELATION TO THE OLD CHIANGMAI WALLED CITY

156



Figure 107



# CHIVA WARIN CENTER BY THE MAE PING RIVER CHIANGMAI

## AERIAL PERSPECTIVE SHOWING THE OVERALL PROJECT SITE IN RELATION TO THE OLD CHIANGMAI WALLED CITY



Figure 108



# CHIVA WARIN CENTER BY THE MAE PING RIVER CHIANGMAI

## AERIAL PERSPECTIVE SHOWING THE OVERALL PROJECT SITE IN RELATION TO THE OLD CHIANGMAI WALLED CITY

158



Figure 109



## Conclusion

### Chiva Warin Center (River Life Center) By The Mae Ping River, Thailand

#### Reasons for locating the building components where they are:

For too long Chiang Mai has overlooked its natural waterway resource, the Mae Ping River. I will try to redress this oversight. My planning and design aims for the balanced development of both banks of the Mae Ping River. In doing this I have to take note of the physical constraint of what land parcels are available on both banks and what existing buildings should not be demolished e.g. the Wat Gate Complex, the Sabha Mosque, the old Lanna style shop houses, residential areas, or the Police Station and the Post Office.

To the question as to why the Cultural Entertainment Center is located on the eastern bank of the river the reasons are three fold:-

- (1) The land areas available is the largest in the project site and is almost square in shape ideal for the building I have designed.
- (2) This Cultural Entertainment Center is a cultural symbol inspired by Thailand's water lily so fundamental to Thai art and Buddhism religion. It is also mankind or Corbusier's "hand" mantra for universal peace and brotherhood. Most fitting for its multi cultural and religious neighborhood in this Foreigner District.
- (3) Northern Thailand is famous for its music and folk dancing and festivals and by providing an appropriate home to preserve and promote these classical dances

and music and developing them to suit modern times. This would help in creating jobs for the locals who want to sell their goods and teach visitors about the place. It is therefore very appropriate to locate this cultural institution with a magnificent floral forecourt fronting the Mae Ping River and further linked by a waterway to further enhance its relationship to the river. The complex itself is linked also to the other cultural buildings namely the New Art Galleries and the new Museum Great works of art and cultural masterpieces whether visual or aural would inspire people to reflect and meditate on the wonderful heritage of their tradition and history. Hence the close proximity of the Meditation Center and the health spa situated in the wetland zone to unwind and induce further inspiring thoughts. A strong **cultural/entertainment belt** is thus designed on the eastern bank of the Mae Ping River, all with direct access and frontage to the River.

On the other hand on the western bank of the Mae Ping River the new shopping center is located closer to the present market and the old city center. This again is appropriate for the convenience of the shoppers. Similarly the Fisherman's Wharf is situated on this side of the River to give life to the Mae Ping River day and night, thus creating a **commercial belt** on this side of the river bank.

I want to see a great new University for Chiang Mai by the River. It is a matter of wonder to me why this has not been done before. If we look at some of the greatest universities in the world, whether Harvard, MIT, Oxford or Cambridge they have chosen the river sites and developed with great pride their boat



rowing teams. Hence the locations of the University and Kayak Club, close to each other.

In today's globalization world, a university cannot be an ivory tower. It has to be in the thick of business, the business of life, very much part and parcel of society. Hence this university is also right in the heart of the city by the riverside. Every component of the campus is orientated towards the river, the Academic Housing and Students Housing for example the angular siting of the faculty buildings are all directed to face the river. A strong campus axis for pedestrian walkway and culminating in the university clubhouse and boat rowing pier emphasize this nexus with the Mae Ping River.

As Prime Minister Yingluck is now actively signing up with the Chinese Government agreements to do more business with China<sup>1</sup>, superfast trains, agricultural and trade cooperation for the next 5 years through 2016, it is therefore important to develop a business faculty that will specialize in the teaching of Chinese to Thais, English to the Chinese and what it means to develop Chiang Mai into the hub for Thai – Chinese business aiming at US\$100 billion as proposed by the Chinese Premier Wen. No greater opportunities await Chiang Mai and therefore this new university by the Mae Ping can fulfill a great role with agriculture, aquaculture, green sustainable technology research and specialization aimed at the vast Chinese market. The University would also protect and develop further the tradition and skills of the ethnic minorities of Thailand, Myanmar, Laos, Vietnam and Southern China.

To conclude the project is an appropriate way of reviving water's past, present and future stories with new structures, floating markets, water canal linkages branching from

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<sup>1</sup> Washington Post Report by AP Published 17 April 2012

the river, bringing back water passages and pathways and boat ways. The Cultural/Entertainment and Commercial belts frame the water's edge to attract people and activates the public spaces within it. For too long the river area has been neglected, this project has brought back past activities and new activities to the river's edge and it will continue to evolve through the years.

## Reflections

Throughout the research and the design project I have learnt that in order to bring activity and people back to the riverbank one must create more activities along the riverbank. The public spaces allow for spontaneous and social gatherings because of all the new designs along the river, especially the Cultural Entertainment Center which gives jobs for the residents and educate the community as well as visitors. The commercial belt and cultural belt will frame the river similar to the communities along the Chao Phraya River with its Thammasat University, for this project it is the Chiang Mai University Mae Ping Campus which will bring new and young blood to the riverbanks, the Fisherman's Wharf beside the University creates a wonderful pastime for the students and faculty to remember when they no longer study there.

By allowing the floods to inundate the gardens and wetlands it gives back land to the river during the raining season ( which is only a few days a year). This will put the river's characteristic in the foreground, especially when the boardwalks become the only way to circulate the project site, it creates a new outlook to river life. During normal circumstances when the river is not overflowing there will be reflective/ cooling pools surrounding the new



designs to remind visitors of the nature of water (that it has cooling, reflective and calming powers) and as a secondary water body to the river. By having the new buildings be monumental highlights the uniqueness and special quality of the existing culturally rich buildings the surrounds the project. The pathways along the old and new buildings are improved with better pathways and more greenery to better connect the whole development. The floating markets have a more traditional design to frame an old river to bring back life on the river with commercial trade from the community, bringing the life of commerce to the river. The Marina adds to the riverine activities as a more convenient place for boating and gathering.

Overall I have learnt that it would be disrespectful to emulate the old buildings but have new designs based on the context of Chiang Mai's history and culture for a new take on contemporary Lanna Architecture which is a wonderful hodgepodge of different ideas and influences. This is a celebration of old and new not a static, stuffy museum that takes visitors back in time. This is a living development which protects and preserves the past yet is striving to frame a majestic river with provocative buildings that would one day be a new landmark of Chiang Mai. This is my take on how to frame the Mae Ping River and generating activity for locals and visitors for the present and the future and unique relationship between old and new allowing for both entities to shine in their own light. Even the linkage pedestrian water canals linking the project to the river is to support the role of the river as the main body of water with a network a tributaries spreading out from it to connect the surrounding urban mold of Chiang Mai City. This creates a new age of living with and around water remembering its old stories and making new ones as well.

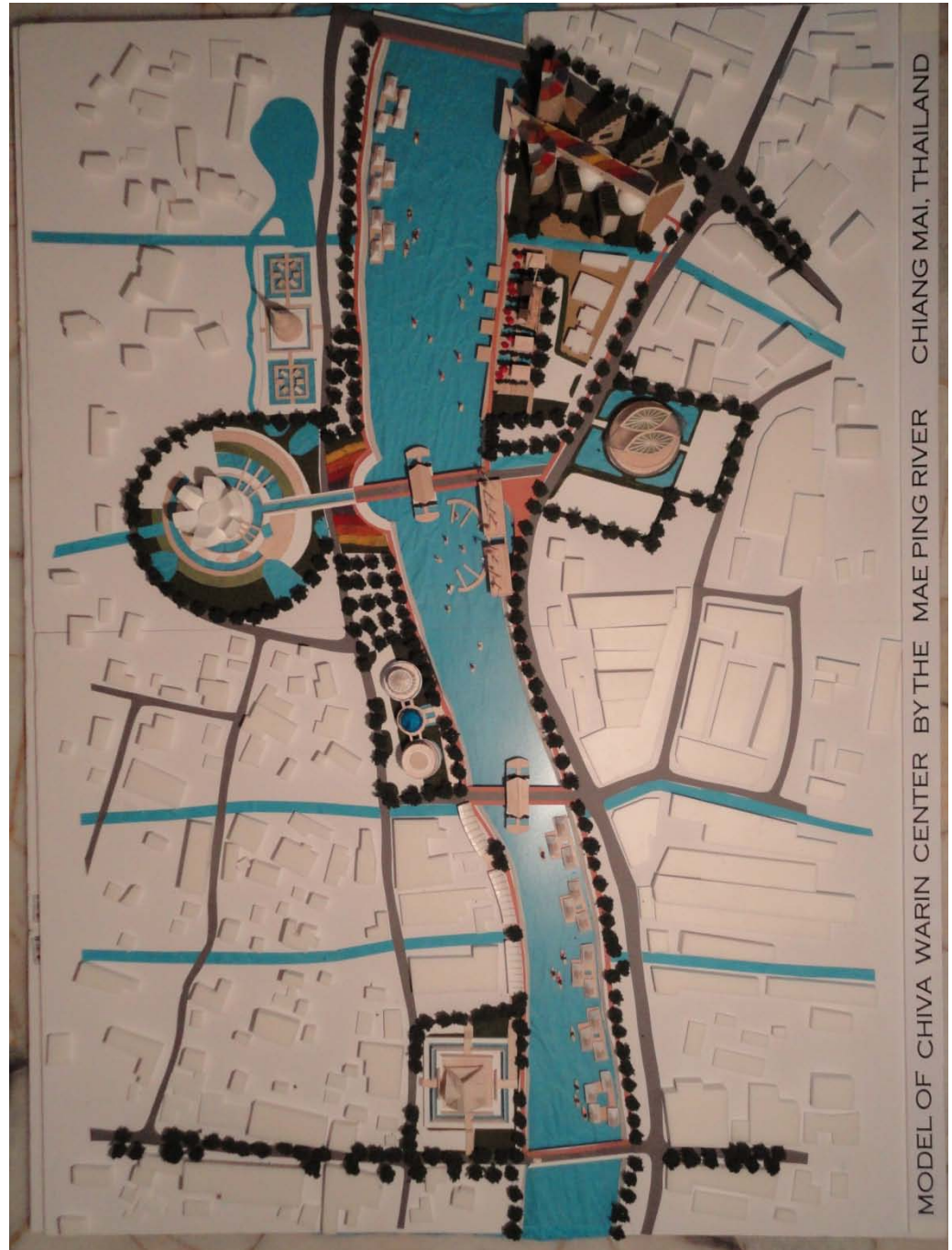


Figure 110 - Image of physical modal of Chiva Warin



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## Appendix

### Community Space Revival By Waterfront: A Case Study of how Communities Preserve Traditions in their respective Gathering Spaces

The focus of this part of research is to study a community space in two sites of Thailand's waterfront communities which its locals as well as outsiders are at the moment trying to conserve. The goal is to learn from their mistakes and successes in conserving and revitalizing their traditional space of gathering, it is also to document their journey on how these communities have strengthened their gathering space. From there a guideline shall be extracted for other cities to use as a reference.

This is a comparative study of historical settlements using the waterfront community of Chanthaburi and Kudi Chin community in Thailand as case studies of how these two multi-cultural communities of old have maintained their traditions in their public gathering space. The rationale behind this is to learn how historical spaces survive up till now. How they differ from one another and what types of spaces they choose for the preservation of their history; for example one place of interest for that is the open space in front of religious structures in one community, while in another are the shop houses that line the edge of the river. So by studying the gathering spaces in each district I can compare how the two site's public old areas differ in their function, venue and usage.



The multi-cultural history is present in the two waterfront communities, how have they maintained it all these years? The communities within these areas have pride in their old-town style heritage and want to maintain their traditions that they are doing today for future generations to value. However the speed of urbanization is quickly eating up the land and filling up canals that were once marketplaces in which the architecture and heritage of these places are dissolving, soon forgotten and no longer regarded as cost efficient for waterfront properties. Waterfront communities' are prime locations for trade, communication, transportation, and social gathering edges. I believe that these sites have communities that are worth preserving if there are still traces of history still embedded in the everyday life of the community or in its architecture.

With help from institutes in planning and design these communities are able to showcase the heritage of their neighborhoods, through workshops and projects. Some of them are launched by the Association of Siamese Architects who aims to protect old historic buildings and promote social integration of the older generations with the younger ones, keeping the traditions alive and relevant. What these communities all have in common is the areas that tend to have traces of tradition and history are the public spaces close or on the water's edge (rim nam).

If we as designers can truly learn from the past and are able to apply it into our plans for the future then the output would give that design a sense of place, sensibility to its cultural heritage, and be a guideline for other historical communities to use for their public space revival; that is the purpose of this study. This study will also offer guidelines for conserving the two different public spaces.

## Description of Sites:

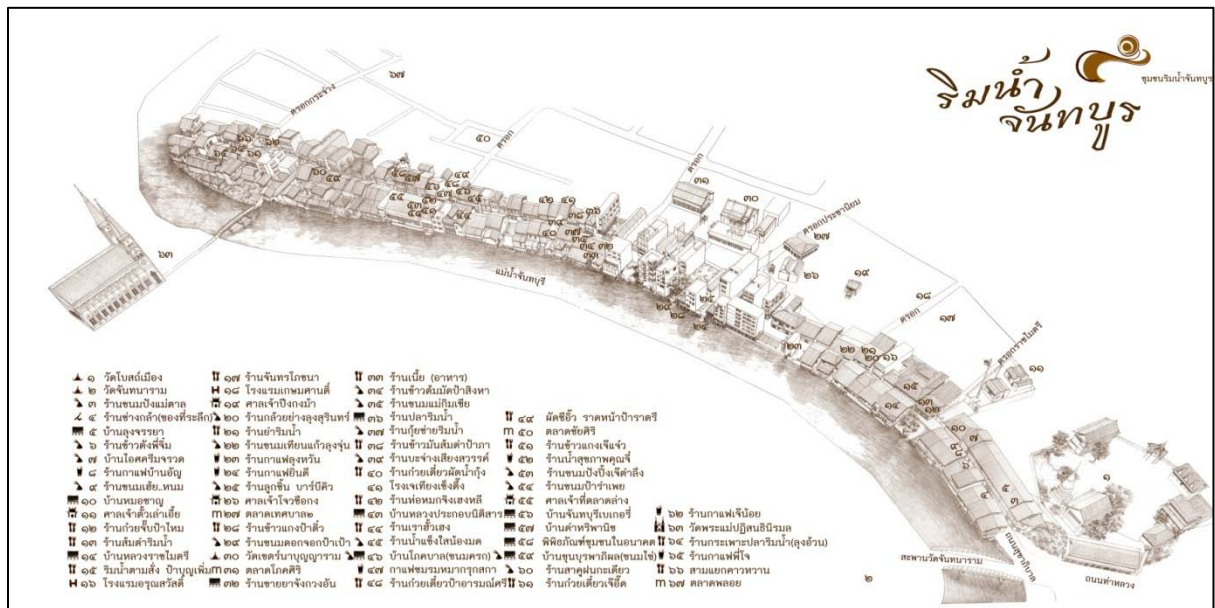


Figure 1. Chanthaboon, Thaluang Site. Source: [http://www.chanthaboonriver.com/images/map\\_1.jpg](http://www.chanthaboonriver.com/images/map_1.jpg)

The Chanthaburi site is a riverbank community on the South eastern part of Thailand, 4 hours away from Bangkok; it is rich in history and natural resources, such as spices (peppers), durian fruits and rubber from the rubber trees. The site was once a major trading port (Sukutsathian and Supurtipanish, 2009). The old town of Chanthaburi is an old trading community which is the first stop for port in Thailand. The three dominant cultures belong to the Thai, Vietnamese and Chinese communities. The old market street of interest to this paper is a well-used street all year round but during the Chinese festivals it is a very crowded pedestrian pathway. This community works with both the Arsom Silp Institute of Arts and Swedish founded Vernadoc (Vernacular Documentation) undertaking projects with the local community and high school to learn the vernacular Architecture and people mapping by Arsom Silp has helped gain outside recognition and improved the chances for sustaining the local culture and has earned the community a sense of pride as well as educating them.



There have been two major disasters that could have wiped out the old settlement during the 1990s. In 1990 there was a big fire along the riverbanks which destroyed about 40% of buildings; later on in 1999 there was a massive flood that submerged the structures along the river completely. It is very admirable just how ingenious humans are in surviving and saving so many of what was left after these disasters, especially things like saving their public shopping pathway which is steeped in history.



Figure 2. Chantaboon major fire in 1990. Source: Presentation by Sukutsathian and Supurtipanish, 2009.

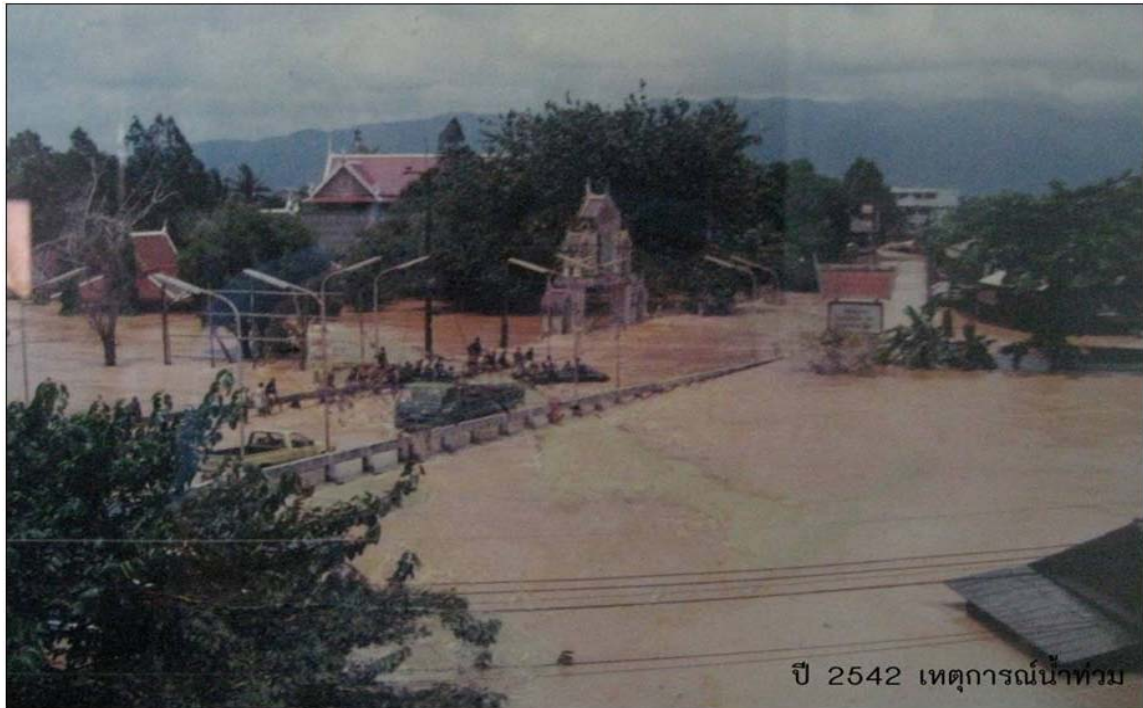


Figure 3. Chantaboon flood in 1999. Source: Presentation by Sukutsathian and Supurtipanish, 2009.

The other case study is the Kudi Chin community within a group of six communities; Wat Kalaya, Kudi Chin, Wat Prayurawong, Wat Buparaam, Kudi Khao and Roang Kraam, making up a district with different beliefs and religions. These sub districts have been around since the 17<sup>th</sup> Century; from the beginning of the Rattanakosin era. The historic klong communities are situated along the Chao Phraya River in the heart of Bangkok. It has a few canals still running through them from the Chao Phraya River. Originally it was a klong (canal) neighborhood but there is not so much importance placed on that lifestyle anymore. However there are some elevated walkways along riverine houses facing the water which residents use as an outdoor living room where they talk to friends and neighbors, eat and do laundry which is part of the klong lifestyle. It has influences from Muslim, Buddhist and Christian religions as their places of worship are the landmarks for each sub-district. The religious leaders of each community all



came out together during the Kadeejeen Silp-In-Sois design workshops to support their sub district's diversities.

**The Site of interest in Kudi Chin is the open spaces in front of each community's religious structure:**

In a paper called "The Evolution and Settlement Patterns of Kudi Chin and Wat Kalaya Communities, Bangkok" by Pamila Hararak for her Master in Architecture degree for Chulalongkorn University, Bangkok, Thailand; she talks about the failures of Wat Kalaya community because it no longer has many of its old residents to keep the traditions and culture alive. Most of the residents are migrant job seekers choosing this sub-district for its cheaper living costs. Temple events are very few and not a lot of the community attends functions held there. Whereas in another sub-district which was a case study for Penchan Phoborisut who states in his paper that 95% of residents are descended from the original Muslim residents in Kudi Khao have a strong religious community. Hararak also wrote about how the other communities apart from Wat Kalaya have a very strong community bond with the religious landmark because they are looked after by that particular religious committee in their community so they have kept their traditions because locals take part in the events and planning which is why there are more social events in front of their church, mosque and temples because there's a strong sense of ownership by the community and how their traditional gathering spaces in front of sacred places have survived up till now.

Wat Kalaya however does not have a strong voice because they have to answer to a Thai Buddhist Association. This Association is not in any ways affected by any development or

changes that occur in that district because they are not part of the Wat Kalaya community so there is always the chance that if they wanted to relocate this historic community they could do it because the land is owned by them, thus wiping out an old Thai riverine community for a new development project. Hararak strongly advises that the people living on the land should have power in their voice; if they want to maintain their traditional historic community which all of the people in the Kudi Chin communities want then they should have the power to make that happen.

Whereas in another sub-district which was a case study for Penchan Phoborisut who states in his paper that 95% of residents are descended from the original Muslim residents in Kudi Khao have a strong religious community where the Muslim Mosque is closely tied with its community who uses the mosque. Hararak also wrote about how the other communities apart from Wat Kalaya have a very strong community bond with the religious landmark because they are looked after by that particular religious committee in their community so they have kept their traditions because locals take part in the events and planning which is why there are more social events in front of their church, mosque and temples because there's a strong sense of ownership by the community and how their traditional gathering spaces in front of sacred places have survived up till now. The only downside to these communities is that they do not have the income to restore their physically rundown structures; I believe that the sense of community and intent is there, they just need the monetary help to restore the old structures. The khlongs are smelly and polluted from poor or no drainage systems and they want to restore their old structures but they are also offered a cheaper alternative that would improve their living conditions but destroy any physical trace of the past because they could replace the old structures with cheaper concrete. The community is hesitant in doing this but already some old structures are replaced with concrete homes which is why designers such as Hararak and



students from design schools are holding workshops, seminars and charities to stop this erosion of historic architecture from gaining too much momentum and get more money and sponsors to restore the old structures for these old communities and improve their waste management.

In part of urban expansion and infrastructure growth physical attributes of the place can be lost because water bodies become filled in for roads or condominiums. For example Pak Khlong Talat, the fresh flower market by Saphan Put Pier in the Wat Kalaya community is popular among local Thais who find this market as a symbol of Bangkok's history. The market used to have a floating market section similar to Bangkok's Floating Market (Talat Damnoen Saduak) but it was filled in and that khlong culture is at the moment lost and forgotten.

With the ongoing problems in the south of Thailand between the Thais and Thai-Muslims Kudi Khao proves that they can maintain a peaceful and diverse district when there is a difference in religion. The Thai-Muslim residents still reside in this area. In the documentary of the 2nd Kadeejeen Art-In-Sois the leaders of the four different beliefs came together to represent their unity in conservation projects and cultural exhibitions. In Hararak's paper she mentions that the Kudi Chin community is very successful in maintaining its traditions because the Santa Cruz Church has an open space in front of the building to host many community events. Most of the Kudi Chin residents are devout Catholics because they're the descendants of the original residents and follow them in their beliefs. "Notably, one of the unique characteristics of Bangkok old town is the variety of religions, races, occupations, and traditions. Local communities have maintained their cultural complexity for years without any severe conflict" (Sirisrak, 2009). In fact the Christian institutions look after their people well compared to the Thai temples as they try to give money and hold as many events in their gathering spaces for the community. The old districts along the Chao Phraya River where the government helps in

protecting and promoting the cultural heritage; both the government and community coming together to preserve culture is evident in some of the buildings around the Grand Palace Complex but at often times it is only the religious structures that are revitalized not the community in that area. The planning authority should try to focus their attention to the communities around these old temple complexes so the whole neighborhood can flourish at the same time that these temples do in Hararak's opinion which I agree.

**The site of interest in the Chanthaburi province is the old market street running parallel to the Chanthaburi River in the Thaluang Area:**

The Chantaboon community is a mixture of Chinese, Yuan and Thai; it is a place where people still talk about how when they were young they always hung around the waterfront, it was a place for meeting up with friends, a place to go to afterschool, that's why the saying that they are going to the "rim nam" is a very popular phrase used in this community. The Chantaboon waterfront community has had help from the Arsom Silp Institute of Arts in generating more attention from the Ministry of Commerce. This is different from Kudi Chin because it is a commercial edge that locals use often; from housewives in the morning and children playing in the afternoon. This is not a sacred place but one of entertainment, socializing, commercialism and just recently education.

In an interview with the locals of Chantaboon, Supurtipanish asked them how they felt about foreign visitors as tourism is a booming industry in Thailand and the majority of them do not want a shopping street which caters primarily to tourists, the main point was to bring back the old sense of community, bring back old hang outs and support their own local businesses such as food and jewelry craftsmen. They want to keep their old mom and pop shops, keep their streets busy and small, at a human scale so they welcome the dense hustling and bustling



interaction between vehicles and humans. They do not want their old street to go too big and impersonal. The characteristics of the street that they would like to keep are the regular heavy foot and vehicular traffic, which is a familiar and welcomed scenery. From the Chanthaburi point of view promoting tourism might not be one of the first steps to take when trying to preserve and conserve gathering places for local traditions thus both the students from Arsom Silp and the leaders of the community want to improve their community from within first by encouraging for a very cohesive community which would aide them in the long run and revitalizing the old town houses with its unique architecture.

### **Issues:**

#### **Pollution**

As mentioned earlier the Kudi Chin area used to be a khlong village with floating market and riverine houses. Is it possible to bring back that khlong culture? Lately the waters of the Chao Phraya River has improved since a decade earlier when its brown and muddy waters was so polluted that there were dead wildlife floating on top of the water. Now the river's ecosystem has somewhat improved, however it is by no means clean as some riverside houses still have only one way of removing wastes; and that's by dumping it all into the river.

#### **Floods**

At the moment Thailand is suffering from flooding from the central part towards Bangkok. The government is trying to push excess water to the sea but the problem has not lessened. Town provinces are inundated by water; many people have died trying to survive day by day from more flash floods and drowning. Crocodiles are loose from their farms into the muddy water that used to be roads or rice fields so people trying to collect food from the fields

get a horrible surprise, a lot of regular residents have to start wrangling crocodiles to return them to the farms by electrocuting them. Locals are going back to using boats as a mode of transportation but sometimes the forces of nature can still destroy these boats. Flood gates in the area are poorly maintained and organized prove inefficient in reducing the problem.

Because the Chao Phraya is the last water catchment basin before all the water from above goes into the sea the river is swelling up and out towards the communities along the river. These old khlong communities are already affected by it. Even the residents in the Chantaboon community living along the river have to evacuate to higher ground.

**Remember there's a river next door:**

In the old days the royal family assigned land along the waterfront to the people who worked for them. Thus these properties are owned by old Thai families who normally sell their land to the highest bidder which is why there are hotel developments and businesses which block access to the river from the public. Because regular people who don't come from these old Thai families who've served the Royal family in the past live less than a kilometer away from the waterfront yet their lives are so detached from it because of inaccessible pathways and gated private residences or hotels which definitely prohibit the public from entering. So these private zones blocking the waterfront from the public is a major factor in detaching the water from its people. Water is no longer in the forefront of the resident's minds; it takes a natural disaster such as flooding for them to realize that they can't turn their backs on the environment. In the past there was a government project which realized this problem but because of low budget and no land they built a mediocre river boardwalk on the river that is supposed to connect people to it. The project was not a success as they did not study the site well and not a lot of people use it.



For the Chantaboon community it seems that only the old folks and adults can look back fondly at rim nam activities. The latest generation has yet to assimilate their lifestyle with the waterfront. In this case Chantaboon is headed in a promising direction because there is more interaction with the river, at least to cross from town to the old cathedral which sits on the other side of the river. Because the locals are religious people a lot of families go to church regularly and these outings become a part of family rituals and the community's traditions. There are boat races on the Chantaboon River which people like to watch as well as foreigners going there for river kayaking. This is one of the differences between Kudi Chin and Chantaboon is that there is an old water body dividing the religious spaces and the popular social gathering area so user must acknowledge the river which is why there are more recreational activities there. In my opinion I think that because the market is the area for gathering it is more relaxed in the many activities that can happen, whereas in a more religious setting, activities outside the box are not as prolific out of respect to the setting.



Figure 4. River boat racing with the Cathedral in the background. Source: Presentation by Sukutsathian and Supurtipanish, 2009.

### Is it worth preserving?

Until recently the public voice in Thailand has not been very active in cultural restoration as stated in a paper by a University of Tokyo Graduate, Tiamsoon Sirisrisak “Thai Government initiated the restoration works for the bicentennial celebration of Bangkok. Since then, conservation work has always been in the hand of the government with a little public participation.” Participation of the public is important as they are the most current voice for cultural heritage; people in the old communities have a say in the planning decisions for their living space; because it is their lifestyle that basically shows how much of history is in it. Now these communities are speaking up in the direction that their neighborhoods should take; most



of them want to maintain their traditional architecture if their families have lived in that area for more than a hundred years.

The neighborhoods within the Chantaboon and Kudi Chin sub-district believe that their mix of different cultures have evolved into part of the Thai culture over the years. The outside influences have shaped it into a unique district with historical value because its community acknowledges its mixed culture and want to conserve it, making it an important historical asset to the country from an architectural, anthropological and historical point of view. Both communities have had strong outside influences in the past which have molded it into the cosmopolitan community that it is today.

Sukutsathian and her colleague are Master of Architecture students at the Arsom Silp Institute of Arts who started doing this for their thesis in 2009, points out that the problem is because of urban sprawl and the lessening use of waterways as places of trade and commerce, the Chanthaburi settlement is progressing further away from their point of origin and not everybody wants to stay rooted to the past. However because the people who have ties to the communities of the point of origin are a large number of people strongly believe that these spaces still have relevance in their everyday life. (Sukutsathian and Supurtipanish, 2009). I believe that because the resident initiates community activities and events there is something worth preserving. They even held a competition in naming their waterfront community Old Town Chantaboon (Sukutsathian and Supurtipanish, 2009). All these events took place along the market street along the riverbank.

The fact that these design institutes are involved with the two communities means that there is something worth preserving. Because its own people are speaking up for preserving their culture I believe that a crucial issue is already resolved. The human element is very

significant because we are the ones who have the power to retain a culture or to obliterate it by simply forgetting a place and leaving it abandoned. If the locals don't want their community anymore; Architects and designers cannot force them to keep it. Therefore the two communities already have a vital ingredient to the preservation of their public spaces that I must study how they intend to preserve it and what they have done so far.

### **The Difference in Venues for Social Gathering:**

In a paper written by the lecturer from Assumption University Bangkok, Penchan Phoborisut "Understanding The Identity Of The Thai Muslim Community of Kudi Khao In Thonburi, Bangkok" Kudi Khao community has one of the oldest Thai-Muslim community in Bangkok alongside neighboring communities of different cultures and religions; together all these neighborhoods boasts the motto "one sub-district, three religions" (Phoborisut, 2008). The different communities are Wat Kalayu, Kudi Chin, Wat Prayurawong, Wat Buparaam, Kudi Khao and Roang Kraam, the cultural influences of each of these communities differ from one another; some might not be as well conserved as other. As religion is an important aspect in this sub district the part that survived all these years is the space in front of the structures of worship. This is one of the reasons why the gathering spaces are not the same. One is a place for worship and more formal congregation while the other site is a place stemming from commerce and trade. Although both places are a melting pot of different beliefs which in the end come together in their gathering space; in Kudi Chin's case it revolves around sacred spaces, respectfulness and worship.



For example Kudi Chin is the Portuguese community that has the famous Santa Cruz Church which is the landmark for the community, the Masjid Kudi Khao is a district with descendants from Cham Muslim countries who relocated there after the Ayutthaya Era, next is the Kuan Yin Shrine that is looked after by Thai-Chinese families for the last 200 years in the Wat Kalaya Sub-district, the other communities are mainly Thai Buddhists. These neighborhoods have managed to maintain their diverse cultural heritage of three religions and four beliefs (Theravada Buddhism, Mahayana Buddhism, Christianity and Muslim) in varying degrees of success since the Rattanakosin (Thonburi as the capitol city of Bangkok) Era coexisting together in peaceful harmony as stated in an article by the Association of Siamese Architects in their display flyers regarding the workshop of the 2<sup>nd</sup> Kadeejeen Art-In-Sois (where art installations linking the communities together took place) in November 19-21, 2010. Even the community leaders from the southern part of Thailand who are facing problems in difference in religion are asking the community leaders of Kudi Chin how they have managed to have such a diverse sub-district without any religious conflicts. I think that this is why the Kudi Chin neighborhoods use their particular gathering spaces because of the uniqueness and acceptance from all communities they take pride in their diverse beliefs which instead of segregating neighborhoods has combined them together to have a strong sense of community unifying 6 neighborhoods. The public space might not be used daily like the Chanthaboon site but because their functions are different to the Chanthaboon public pathway, Kudi Chin focuses more on spiritual and social enrichment while Chanthaboon adds retail enrichment to the mix as well. Plus temples and religious spaces were the main venues for community gathering historically in Thai culture and Kudi Chin has kept that tradition current which is a remarkable feat after so many years which should continue.

On the other hand the Chanthaburi waterfront community has a mixed culture, old market street that has signs of Chinese, Western and Thai influences. Originally being a port settlement the community is descended from travelers from different countries and Thai people. This makes the site comparable to Kudi Chin because of their similarities in how they came to be. Because religious processions go through the Chanthaboon shopping street it is more of an exciting hub for different uses.



**Comparison Table of the two communities:**

<b>Kudi Chin Communities</b>	<b>Chanthaboon Old Town</b>
<b>Community Type</b>	
Waterfront klong community	Waterfront community
Part of historical and current port city	Historical port city
<b>Religious Landmarks</b>	
3 religions, 6 beliefs  Religious events are held on the lawn in front of the temple or church	Different religions and beliefs; where Chinese Buddhists have the largest annual festival on Sukhaphiban 1 Road
Santa Cruz in Kudi Chin is the most famous landmark facing the Chao Phraya River	Catholic cathedral as historical landmark across the Chanthaburi river
<b>Venue</b>	
Social gathering events take place on the temple or church lawn once in a while	Busiest social gatherings take place along the Sukhaphiban 1 Road parallel to the Chanthaburi River daily
Architectural mixture of regional and outside influences of Thai, Chinese, Muslim, and western colonial architecture (Portuguese and British)	Architectural mixture of regional and outside influences of vernacular Thai, Chinese, Vietnamese, French, Dutch, and British

<b>Community</b>	
Each community has its own community leader	A group of the community's leaders are invested in conserving their heritage
Religious leaders from these communities got together to try to create a stronger bond between the communities	Group of local residents got together to try and create a sense of community for the neighborhood.
<b>Research Strategies</b>	
No people-mapping was done, but local interaction was prominent once the design workshops (Kadeejeen gained momentum through their activities)	People-mapping was done by two Architecture students over a period of 6 months
Informal interviews with locals done by Pamila Hararak	
<b>Problems</b>	
Wat Kalaya community's condition in preserving their way of life is in danger because they are the only community that is controlled by an outside institution	Some run down historic shop houses aren't properly maintained so some parts have new additions to the structure that is not authentic to the original style
Faces imminent danger in younger generation moving to the city centre for better work and	Community high schools and university aide in preserving and educating the public on the town's



quality of life	history
Some neighborhoods (Kudi Khao) have short-term residents who do not interact with the community and only stay there at night and are working somewhere else during the day	The greater part of the province don't go to the old area as it is no longer the central business district area so the site is not as convenient nor is it the city's center; it is a place the is out of the way for many people
<b>Activities</b>	
Cultural festivals are performed by the locals for people to watch	Activities for everyone to join such as community naming contests and old photograph collecting exhibitions
Design workshops held by outside institutions get people from outside the communities to view and participate in the community activities	Bangkok-based owner of a historical (mixture of Thai, Chinese and French colonial architecture) town house in the Thaluang area donated his house as an information center where activities and exhibitions are held
Annual art workshops take place in the small lanes that run between the communities by locals and design institutes. Water festivals such as Loy Krathong takes place by the river for locals and visitors to take part in	Residents create everyday activities for everyone to participate inside the information center.  Cultural festivals and processions are still held through the street

The major difference is that the Kudi Chin communities has multiple religious gathering sites that is open for all the communities so it is more of a journey of different gathering spaces that people travel through along the river. Unlike the social gathering venue in the Chanthaboon site which is a dense, single pathway, more of a high street with all the market functions for the community and for festivals and processions to travel through.

#### Kudi Chin Successes & Weaknesses:

Successes	Weaknesses
Maintained its culture and history through temple and church activities	Activities are limited to religious events
Klong lifestyle is present in the walkways connecting the riverine houses which acts as the community's 'living room' space	Some klong lifestyles have disappeared such as the floating markets
Access to the social space is convenient because the road to church is well developed and maintained	Living conditions are poor because of poorly constructed or none-existent drainage systems so wastes end up in the river



Old historical house with a mixture of colonial and vernacular architecture still exists; residents still use their walkways in front of their house on the river as an informal living room area where they eat, wash their clothes and talk	Historical houses cannot be looked after by its inhabitants because they do not have money; elevated walkways on the water are disconnected and worn out
The residents of these houses want to preserve them	Concrete is the cheap alternative which improves living conditions which residents can afford
Portuguese style dessert making tradition still remains	The Portuguese style dessert is made and remembered by only the older generation; the younger ones do not want to continue in the older people's footsteps

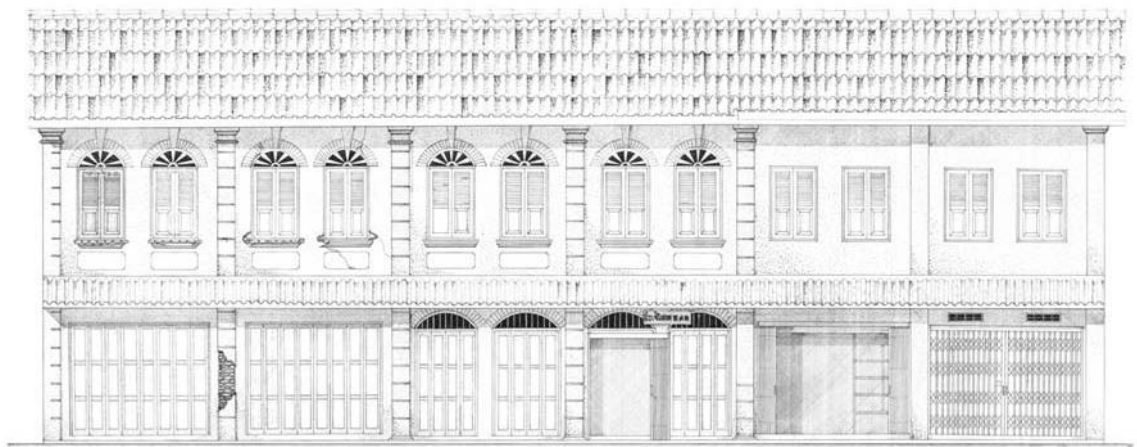
#### Chantaboon Successes & Weaknesses:

Successes	Weaknesses
Traditions have remained throughout the old shopping street	Younger generation are moving out towards the bigger cities in Thailand for more job opportunities
Chinese festival holds the most popular and famous social gathering event of the year	The community has suffered two tragedies in the past massive floods and fires have

	wiped out most of the structures along the waterfront
Most of the community want to preserve its old shopping street style and aims to bring back their traditional way of life	Because of urban sprawl the old shopping street is no longer the center of the city; instead the city center is located on what was considered the outskirts of the city; thus the old shopping street is not as convenient as it used to be
Many of the mixed style regional/colonial architecture exists in the rows of shop houses along old shopping street	The historical structures are not in good condition
Strong community interaction in looking after the area, they aim for full community interaction	Some houses are already replaced with new ones that are disconnected from the site
Different types of markets that existed since the old days like the Famous Jewel Market still remains	Old craftsmen knowledgeable in the traditional method in building the old structures are hard to find and expensive so alternatives will have to be used in preserving them
Local community wants to restore the old market street for their community most	Ministry of Commerce wants to restore these areas with tourists in mind



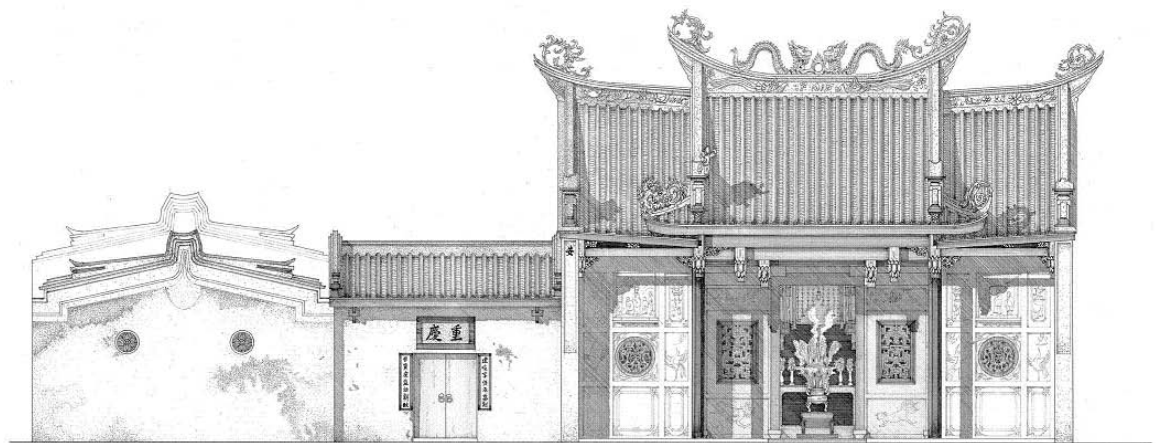
importantly not for tourists	
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**Figure 5. Vernacular Documentation done by Building Construction students from the Chanthaburi Technical College. Source: Presentation by Sukutsathian and Supurtipanish, 2009.**

The activities that takes place in Chanthaboon and Kudi Chin with Vernadoc (a vernacular architecture documentation foundation which promotes understanding and respecting vernacular designs) is an important activity that has design students from the surrounding area (in the case of Chanthaboon and from Schools of Architecture for the Kudi Chin workshops) to do beautiful hand drawn drawings of the existing historical architecture for documentation of vernacular architecture. The Building Construction Division of the Chanthaburi Technical College students took part in studying and drawing the historical

buildings to collect and exhibit them in the community learning house together with Vernadoc. They stated that they learnt a lot from the experience, producing exquisite drawings and are participating in the community activities more because of what the Arsom Silp Institute and Vernadoc encouraged in the beginning. It seems to me that what started as a dissertation project for two students is the push that the community needed to preserve and document their traditions and public space with enthusiasm and helped gain recognition from outside agents like the Provincial Ministry and the Rockefeller Grant. Now the two students that started this project are continuously working on their dissertation and working together with the community to get the Rockefeller Grant to continue with the development of renewing the historical shop houses while keeping its historical integrity. The students are now part of the community.



*1) Mahayana Buddhist Kian an Keng shrine / measure drawing by Nattakrist Supakornpinthakoopt, ASA VERNADOC 2007*

**Figure 6. Vernacular Documentation of a Chinese Buddhist Shrine. Source: [www.vernadoc.multiply.com](http://www.vernadoc.multiply.com)**



To conclude residents should want to use and maintain their gathering spaces or else, what is the point of having spaces for public events when the community does not want to use it? Living in urban Bangkok has caused many house dwellers to be very private and introverted; so by promoting gathering spaces community life can improve and hopefully that would lower the crime rate if everyone knew each other. “Thus the way of living, such as traditional businesses and food, should be maintained and presented. Local people must have a channel to take part in the city development programs whilst cooperation among groups of people and government should be introduced” (Sirisrak, 2009).

Public spaces are the best places to channel communal activities. As well as depending on how much the community participates in its own communal activities shall help to gauge the place’s sense of community. In a discussion with the Architects from Arsom Silp; they have learnt from experience that the locals in these communities love the exhibitions that were put up at the end of their projects; especially ones where their pictures are in it. Thus events held in these spaces reinforce the importance and relevance of the venues that hold them. So a marketplace like the one in Chanthaburi is something that happens in the daily lives of its community enforces the spirit of a historical place as well as its significance. An old historical house in the market street was donated by its owner to the community as a Community Learning House which focuses on the community’s history, displaying exhibitions and activities for the locals. This way of keeping traditions is better than just erecting a museum that stands alone from its community creating a larger gap between the people and its history. The Community Learning House is the hub of activities that happened in the old market street in history and now, it is where intermingles with the present and future as the community uses it to learn about its history and to hold new events to celebrate their way of life.



**House No.69 Khun Anusomsombat  
Renuvation to Learning Community House**

Figure 7. The images show community discussions for the use and spatial organization in the rejuvenation of the donated house (by Khun Anusomsombat) for the Learning Community House. Source: Presentation by Sukutsathian and Supurtipanish, 2009.





Figure 8. Local interaction with community exhibitions at the Chantaboon Information Learning Center. Source: Presentation by Sukutsathian and Supurtipanish, 2009.

#### Improvements for the Kudi Chin Communities:

Introducing an information/community center for all 6 communities would help to unify them all and generate more activities that they can participate in on an everyday basis.

Hararak's opinion is to talk to individual residents and allow them to make the choices for further developments in their community. The residents want to preserve their traditions and are happy that they can easily discuss with their temple or church committee in their neighborhood. Disallow outside elements such as developers to make the big decisions for the community in the case of Wat Kalaya; the temple there should be able to help its community so that outside developers cannot just simply build a residential condo or hotel development because they have no personal ties to Wat Kalaya. In Hararak's informal talks with locals the majority want to improve access to their gathering nodes from their homes, not just the main road, but better planning of pathways from the neighborhood to the religious space, clear their

blocked pathways, beautify them and make them less awkward for the neighborhood. As the religious structures and their respective public squares are the main focal point in the community's main gathering space the skyline from the waterfront should not deflect from the temple structures; have height limitations for future buildings. The walkways which connect the houses should still be used as their living space but with an addition of an unblocked passageway for those who have to pass through.

Improvements for the Chanthaboon Community:

Improving access to the site with a pedestrian bridge to span the river to the famous church will bring more locals in the area to the old town. This would improve the linkage to the shopping street. Nowadays visitors like to play water sports such as kayaking and canoeing therefore an introduction of these activities would generate more activities in the river and increasing recognition of the old town.

With the recent flooding in Thailand's many provinces the water levels are going to be a problem for the old pathways along the river. Damning the river would destroy the rivers water accessibility, destroying a historical water transport hub. Controlling water with water-gates would help as well as green spaces to help filter and absorb excess water from floods. The activities taking place on the street is already proven successful so this proves that the more involved the people are the stronger the community traditions become.

A Case of Community Involvement:

On a recent trip to Chiang Mai I was extremely fortunate enough to be part of a team of young architects from a nonprofit organization specializing in projects to improve way of life in communities sponsored by the Siam Concrete Group. The community that I got to work with is



an old community flanked by Chiang Mai's outer earthen wall in which monks used to give their sermons on and transverse in the mornings with their alms bowl asking for food at different communities along the outer wall. On the other side of the community is the Mae Kha Canal which was an old irrigation canal for the 8 communities along it. The nonprofit architecture group chose this community because it is one of the communities along the canal that is under threat of being destroyed by relocation as most of its residents are illegal immigrants from Burma or hill tribes. The team of architects interviewed and researched the area and found out that the community regularly cleans the canal and ride bicycles along the accessible bicycle paths by the water. To improve the sense of community the designers looked into how monks used to give sermons on the outer wall and there is a very powerful spirit house on it which the community strongly reveres. So the community residents wanted to preserve that site but use it as a recreational community park. The designers designed a temporary brick pathway on top of the ancient wall as a jogging track and footpath. The design was simple giving small brick covered spaces as sitting spots, meditation spaces and resting areas. The important factor was as we started cleaning the pathways of rubbish and weeds the residents (such as housewives and builders) joined in on the work voluntarily. With the help of the community we were able to cut costs of hiring outside companies to build the recreation space. The residents were inspired that a team of designers were willing to sit with them and ask them what they wanted to do with a historical space and come up with a plan which we acted out on together with the community. It took us three days to complete the project and plant the softscape. I observed that from the first day the community had participated more than they needed to and children were so excited to play in the space that they helped us pull weeds and throw away clutter as soon as they arrived from school. It was an experience that has taught me that to preserve a community and its traditions is to work hand in hand with them. Now the community knows

how to look after their new recreation space because they learnt along the way as we built it together and residents young and old were part of the whole process.

Guidelines as to how these public spaces should be preserved:

- 1) Talking and listening to community residents; they must be involved in the decision making process as it is their lives and homes that is evolving.
- 2) Creating activities that can get locals interested is important to begin creating that sense of community and belonging. For example at the early stages hold a contest for the townspeople in naming their community or collecting old photographs of the place which invokes memories for the residents.
- 3) Offer ways to improve living conditions of the place. E.g. if walkway facades are unsightly and unsafe, then hold a workshop to clean it up or have design installations to line the streets to make it more interesting.
- 4) Encourage locals to help build or improve their communities from housewives to resident builders giving them a sense of ownership and accomplishment after they have completed a project. When they are part of the project then they understand how to maintain their works; be it a community park or house. Essentially they will have to look after their community to prevent it from decaying as no outside forces is going to constantly check up on and preserve their community for them.
- 5) Bring attention from outsiders which in turn brings in media attention. The locals want to show their community's best features and will want to enhance it. When school of architecture students held their workshops at Kudi Chin, it brought media coverage from the Association of Siamese Architects as well as one of the country's creative



design institutions to broadcast their activities throughout Thailand either through the internet or on television.

- 6) Allow visitors to come and learn from the community. As tourism is a big factor in Thailand's economy, getting attention from foreigners who like the novelty of old and cultural things in Southeast Asia could push residents to be more curious about why visitors can look in wonder at things that locals find commonplace and boring. By allowing tourists to visit at controlled intervals so as not to degrade the authenticity of the place or else the locals might mass produce their traditional products; such as the Portuguese desserts that are famous in the Kudi Chin area for using traditional techniques and ingredients as well as for its good taste. One should try to avoid the unfortunate situation where the quality of these products and craftsmanship degrades because it becomes mass produced to meet the demands from too many people. Sometimes having a level of exclusivity preserves old traditions better than having the whole world tramping through the sub district.